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Phase II Audit Report Appendices
Energy & Water Audits of LLNL Facilities

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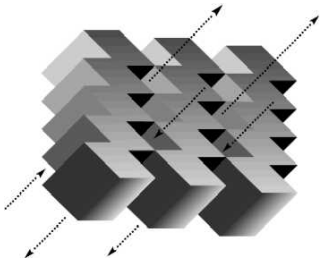

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Executive Summary

This report describes Phase II of a project conducted for the Mechanical Utilities Division (UTel), Energy Management Program at Lawrence Livermore National Laboratory (LLNL) by Architectural Energy Corporation (AEC). The overall project covers energy efficiency and water conservation auditing services for 215 modular and prefabricated buildings at LLNL. The primary goal of this project is to demonstrate compliance with DOE Order 430.2A, Contractor Requirements Document ¶ 2.d (2) Document, to demonstrate annual progress of at least 10 percent toward completing energy and water audits of all facilities.

Although this project covers numerous buildings, they are all similar in design and use. The approach employed for completing audits for these facilities involves a "model – similar building" approach. In the model – similar building approach, similarities between groups of buildings are established and quantified. A model (or test case) building is selected and analyzed for each model – similar group using a detailed DOE-2 simulation. The results are extended to the group of similar buildings based on careful application of quantified similarities, or "extension measures". This approach leverages the relatively minor effort required to evaluate one building in some detail to a much larger population of similar buildings.

The facility wide energy savings potential was calculated for a select set of measures that have reasonable payback based on the detailed building analysis and are otherwise desirable to the LLNL facilities staff. The selected measures are listed below:

1. HVAC Tune-up. This is considered to be a "core measure," based on the energy savings opportunity and the impact on thermal comfort. All HVAC units in the study are assumed to be tuned up under this measure. See the Appendix for a detailed calculation by building and HVAC unit.
2. HVAC system scheduling. This is also considered to be a "core measure," based on the energy savings opportunity and ability to control units centrally during a shelter-in-place event. All HVAC units in the study are assumed to be controlled under this measure. See the Appendix for a detailed calculation by building and HVAC unit.
3. Cool roof. Savings estimates for the measure were applied to all roofs scheduled for replacement in the LLNL deficiency list. See the Appendix for a detailed calculation by building.
4. Window shading. Savings estimates for the measure were applied to all non-north facing windows. Although the simple payback is not a good for this measure, it should be considered for the associated benefits on thermal comfort and to alleviate some of the zoning and thermostat placement issues.
5. HVAC upgrade at normal replacement. Savings estimates for the measure were applied to all HVAC units scheduled for replacement on the LLNL deficiency list. A total of 642 units (about 55% of the total) are on the replacement list, so this represents a major opportunity. See the Appendix for a detailed calculation by building and HVAC unit.
6. Indirect/direct evaporative cooling. Savings estimates for the measure were applied to all HVAC units scheduled for replacement on the LLNL deficiency list. See the Appendix for a detailed calculation by building and HVAC unit. Due to the magnitude of the potential energy savings, this measure should be considered as the new generation IDEC systems become commercially available.

7. Super T-8's. Savings estimates for this measure were applied to all buildings in the study, assuming that the new generation lamps will be rotated in during normal lamp replacement operations. See the Appendix for a detailed calculation by building.
8. Occupancy sensors. Savings estimates for this measure were applied to buildings surveyed as candidates for occupancy sensors during the Level 1 audits. See the Appendix for a detailed calculation by building.
9. Remaining Lighting. Savings for this measure were calculated for each eligible fixture identified during the Level 1 Audits. See the Appendix for a detailed calculation by building and fixture.
10. Water Heating. Water heater and pipe insulation savings were calculated for storage water heaters. The number of storage water heaters in the study was estimated from the total number of buildings and the frequency of storage water heaters observed during the Level 2 audits, assuming one storage water heater per building.

Estimates of the electricity savings for each of these measures extended through all buildings in the study are shown in Table 1.

Table 1. Summary of Electricity Savings Analysis

Measure	Units Treated	Energy Savings (kWh)	Energy Cost Savings	Project Costs[1]	SPB
HVAC Tune-up	1,175 HVAC units	1,667,596	$95,053	$377,320	4.0
HVAC system scheduling	1,175 HVAC units	3,060,105	$187,187	$987,000	5.3
Cool Roof	298,254 SF	98,576	$5,619	$29,825	5.3
Window shading (E, S, and W only)	58,156 SF	303,456	$17,297	$206,266	11.9
HVAC Upgrade	642 HVAC units	725,513	$41,354	$174,489	4.2
IDEC upgrade	642 HVAC units	1,383,907	$78,883	$775,250	9.8
Super T-8	901,651 SF	399,051	$22,746	$46,401	2.0
Occupancy Sensors	370,619 SF	243,602	$13,885	$148,248	10.7
Remaining lighting	1043 fixtures	193,174	$11,011	$38,049	3.5
Water heater and pipe insulation	126 water heaters	43,938	$2,504	$2,441	1.0

Excluding the IDEC systems, the total project has the potential to save 6,735,000 kWh per year, at an annual cost savings of $397,000.

The Watergy program was used to estimate water savings potential in the buildings studied for this project. The outputs resulting from the Watergy screening process indicate two cost effective applications:

[1] Estimated Measure Costs are developed as "contractor" prices, not including LLNL internal and overhead costs which differ depending on sources of funding used for implementation.

ULF Toilets and ULF Urinals

Installation of low flow toilets and urinals could reduce the amount of water used by 1.9 gallons per flush for toilets, or 0.5 gallons per use for urinals. The resulting cost savings associated with installation of low flow toilets and urinals would be due to the reduction of electric pumping and water usage.

Low Flow Showerheads

Installation of low flow showerheads reduces the water usage by reducing flow out of the showerhead. Installation of low flow showerheads includes replacement of existing showerheads.

Estimated water savings for the measures is shown in Table 2.

Table 2. Summary of Water Conservation Analysis[2]

Conservation Method	Number of Installations	Total Initial Cost ($)	Annual Savings ($)			Payback Period* (yrs) *Includes Direct Energy Only
			Direct Water	Direct Energy	Indirect Energy	
Installation of ULF toilets and WATERLESS urinals	473	$184,745	$37,245	-$1	$3,639	4.96
Installation of automatic faucets	411	$135,300	$4,343	$1,116	$448	24.78
Installation of faucet aerators	0	$0	$0	$0	$0	#N/A
Low Flow showerhead	45	$1,395	$1,238	$382	$129	0.86
Boiler blowdown optimization	0	$0	$0	$0	$0	#N/A
Efficient dishwashers	0	$0	$0	$0	$0	#N/A
Efficient washing machines	0	$0	$0	$0	$0	#N/A
Landscape irrigation optimization	#N/A	$0	$0	$0	$0	Annual
Total (excluding Landscape)		**$321,440**	**$42,827**	**$1,496**	**$4,217**	**7.25**

Implementation of these water conservation measures has the potential to save $38,500 in water charges annually.

[2] Estimated Measure Costs are developed as "contractor" prices, not including LLNL internal and overhead costs which differ depending on sources of funding used for implementation

Introduction

This report describes Phase II of a project conducted for the Mechanical Utilities Division (UTel), Energy Management Program at Lawrence Livermore National Laboratory (LLNL) by Architectural Energy Corporation (AEC). The overall project covers energy efficiency and water conservation auditing services for 215 modular and prefabricated buildings at LLNL. The primary goal of this project is to demonstrate compliance with DOE Order 430.2A, Contractor Requirements Document ¶ 2.d (2) Document, to demonstrate annual progress of at least 10 percent toward completing energy and water audits of all facilities.

The Energy Management Program has conducted detailed energy audits of many of the large facilities on the LLNL campus. This project focuses on the remaining buildings to be audited at LLNL, which are single story office trailers, and modular and prefabricated buildings. These buildings are generally comprised of numbers of prefabricated modular units combined to form a complete building. Each module comes with a roof or wall mounted packaged DX HVAC system. The buildings use electricity for all building services, including space heating and hot water.

Although this project covers numerous buildings, they are all similar in design and use. The approach employed for completing audits for these facilities involves a "model – similar building" approach. In the model – similar building approach, similarities between groups of buildings are established and quantified. A model (or test case) building is selected and analyzed for each model – similar group using a detailed DOE-2 simulation. The results are extended to the group of similar buildings based on careful application of quantified similarities, or "extension measures". This approach leverages the relatively minor effort required to evaluate one building in some detail to a much larger population of similar buildings.

Phase I of the project involved compiling existing data sources, planning field data collection activities, and conducting general building onsite surveys at each of the facilities covered under this project. Phase II of the project involves detailed audits of each of the model buildings, development of DOE-2 simulation models, detailed ECM analysis, and extension of ECM analysis results to each of the buildings in the study. This report covers the results of the Phase II efforts.

Analysis of Existing Data

The project started with an examination of existing data resources. Data sources examined include a master site list, equipment inventories, building plans and specs, submetered utility data, building deficiency lists and improvement tracking systems, and wastewater source inventories. These data sources are described below.

Site List

The site list contained a list of all sites included in the study. Within the site list, information on the building type (trailer, modular, etc.), size, occupancy (office, lab, storage, etc.), security status, and construction date was compiled. Since most buildings are "multi-use," the floor area is also broken out by usage.

Master Equipment List Database

LLNL maintains a comprehensive database of equipment in each building called the Master Equipment List (MEL). Detailed inventories of major equipment, including HVAC, plumbing, laboratory, electrical panels and sub panels, and so on are contained within the database. The information contained in the database on each piece of equipment includes building ID, equipment ID, equipment type, equipment description and location, make, model, size (capacity) and serial number, and date of installation.

Building Plans

Facility floor plans were supplied as AutoCAD files for each building in the study. Additionally, the LLNL central database of building plans was queried for additional drawings to facilitate the development of detailed DOE-2 models of the model facilities.

Deficiency List

A list of deficiencies and proposed maintenance/upgrade projects for each building was obtained from the LLNL Maintenance staff. This list helped to identify major maintenance projects that should be coordinated with energy efficiency upgrades.

Facilities Disposition Plan

A facilities disposition plan was obtained, which lists buildings scheduled for decommissioning or demolition. This list helped us to redirect our efforts away from buildings that are scheduled for demolition and focus our efforts on buildings that are likely to remain in service.

T-8 Retrofit Progress

A major lighting retrofit project to convert overhead fluorescent lighting fixtures to T-8 lamps and electronic ballasts is underway at LLNL. A tracking system was developed for this project, and includes information on the quantity of fixtures replaced, date of installation, floor area affected, and remaining floor area to be retrofit.

Utility Bills

Revenue meters for electricity and gas are installed at the “campus” level, so utility billing data for individual buildings is generally not available. However, electrical submitters are installed at selected transformers throughout the campus. In a few instances, the submetered data represented the energy consumption of an individual building included in this study. These data were reviewed and compiled for future use.

Waste Sources

A list of connections to the campus wastewater treatment system was obtained. For the buildings included in this study, the list provides a complete inventory of all urinals and water closets by building and room number.

Preliminary Measure List

A preliminary set of potential energy conservation measures (ECMs) was investigated for this project. This preliminary list is based on ECMs known to be effective on small buildings of the type covered in this project. A general discussion of potential ECMs is presented below:

Envelope ECMs

As stated in the RFP, it is highly unlikely that any measures regarding the retrofitting of exterior surfaces will be cost-effective, due to the low energy rates enjoyed by LLNL. The audit team has therefore focused on the following:

- Buildings that need to be re-roofed and the schedule of re-roofing; these sites may be candidates for additional roof insulation, radiant barriers, and/or "cool" roofs.
- Excessively deteriorated and/or damaged exterior walls that represent a significant loss of energy.
- The potential for shading devices for existing window fixtures.
- Upgrading windows to high-performance units at replacement.
- Door and window openings that could be sealed.

Lighting ECMs

Since most of the lighting fixtures have already been retrofit to energy efficient models, the audit focused on the following:

- Remaining retrofit opportunities (a few buildings without T-8 lamps and CFL replacements for incandescent lighting).
- Upgrade on burnout to new "super" T-8 lamps.
- Lighting controls such as occupancy sensors (wall and / or ceiling mounted), daylight controls, and the use of time clocks.

Moreover, since most of the exterior lighting is already controlled via photocells or time clocks, the audit focused on exterior lighting left energized during daylight hours.

HVAC

HVAC (heating, ventilating, and air conditioning) represents the best potential for cost-effective energy savings at the lab, due to the extensive use of electric heat and the lack of coordinated controls. The building audits focused on the following:

- Unit Scheduling - This simply involves scheduling the HVAC equipment to run only during occupied hours of the day, using local time clocks or a central control system.
- Economizers with Demand Control Ventilation (DCV). This measure involves retrofitting existing HVAC units with air side economizers and demand controlled ventilation (DCV) systems: The air side economizer uses outdoor air for cooling whenever the outdoor conditions are favorable. The DCV system uses CO_2 Sensors to sense indoor air quality. CO_2 levels are typically indicative of space occupancy, and can subsequently be used to determine the amount of fresh air required for a given space at any given time. Demand-controlled ventilation controls vary the ventilation rate to limit CO_2 levels and subsequent levels of airborne contaminants. DCV can save energy in facilities that normally operate with light occupancy, but are designed for heavy occupancies. DCV has limited applicability due the lack of DCV capability in wall-mounted air conditioners and heat pumps.
- HVAC replacement – Savings may be available for replacement of packaged systems that are near the end of their useful life with high efficiency heat pumps. This measure will evaluate upgrading the equipment procurement specification from standard efficiency units without economizers to high efficiency units with economizers.

- HVAC tune-up and maintenance – This is a low cost measure that can improve system performance. Measures include duct obstruction reduction, air flow adjustment, and charge adjustment.
- Evaporative cooling –Evaporative cooling systems are much more efficient that vapor compression systems and can be quite effective in hot/dry climates. New generation indirect/direct evaporative cooling systems can provide adequate cooling without excessive moisture addition to the space.

Water Conservation Measures

Per the RFP, the project utilized the Watergy program to estimate water savings. Watergy estimates potential conservation opportunities for the following measures applicable to this project:

- Installation of 1.6 gal/flush toilets, water-conserving urinals, and waterless urinals.
- Installation of automatic faucets.
- Installation of faucet aerators,
- Low flow showerheads.

The list of measures studied during Phase II is shown in Table 3.

Table 3. Phase II ECM List

Category	Measure	Description
Shell	Cool roof	Re-roof buildings with a material with low solar absorptance
	Radiant barrier	Install reflective or low-e materials in ceiling plenum to reduce roof loads
	Roof insulation at replacement	Add additional roof insulation during roof replacement
	Window replacement	Replace existing windows with high-performance windows
	Window shading	Add exterior shading devices or solar films to reduce summer heat gain.
Lighting	CFLs	Replace incandescent lamps with compact fluorescent lamps (CFLs).
	Daylighting controls	Dim overhead lighting in response to natural daylight from existing windows or skylights.
	Exit signs	Replace incandescent exit signs with LED exit signs
	Exterior lighting controls	Add or repair photo controls on uncontrolled exterior lights
	Occupancy sensors	Add occupancy sensors to control lighting in intermittently occupied spaces
	New generation T-8 lamps	Replace existing T-8 lamps with new-generation “super” T-8s.
Equipment	Plug load controllers	Employ occupancy controls on desktop computers and/or monitors to switch these devices off during unoccupied periods
	High-efficiency appliances	Replace existing refrigerators, dishwashers, clothes washers etc. with high efficiency units.
HVAC	AC tune-ups	Adjust refrigerant charge and air flow, clean coils and replace filters. Service economizers as applicable

Category	Measure	Description
	Evaporative cooling	Replace packaged DX air conditioners with evaporative coolers.
	HVAC replacement	Replace existing AC units with high efficiency heat pumps
Controls	Economizers with demand controlled ventilation	Modulate ventilation air based on outdoor temperature and measured CO2 levels
	Central HVAC scheduling and control	Schedule HVAC systems off during unoccupied hours and control thermostat setpoints from a central system
Water	Automated faucets	Replace existing standard faucets with automatic shut off faucets
	Faucet aerators	Add faucet aerators
	Low flow shower heads	Replace standard shower heads with low flow shower heads
	Low flush toilet, urinal	Replace existing toilets with low volume toilets
	Waterless urinal	Replace existing urinals with waterless urinals
Water heating	Service hot water tank/pipe insulation	Add pipe and tank insulation and heat traps to existing electric water heaters.

Extension Measures

Although there are numerous buildings covered under this project, they are quite similar in design and use. The approach employed for completing audits for these facilities involves a "model – similar building" approach. In the model – similar building approach, similarities between groups of buildings are established and quantified. A model (or test case) building is selected and analyzed for each model – similar group using a detailed DOE-2 simulation. The results are extended to the group of similar buildings based on careful application of quantified similarities, or "extension measures". This approach leverages the relatively minor effort required to evaluate one building in some detail to a much larger population of similar buildings. Unit savings estimates developed from the model building simulations were extended to the full population of buildings in the study using the extension measures shown in Table 4.

Table 4. Extension Measures

Category	Measure	Extension measures	Additional conditions
Shell	Cool roof	Roof SF by building type and heat source	Roof scheduled for replacement
	Radiant barrier	Roof SF by building type and heat source	Roof scheduled for replacement
	Roof insulation at replacement	Roof SF by building type and heat source	Roof scheduled for replacement
	Door sealing	SF by building type and heat source	
	Window replacement	Window SF-ΔSHGC by building type and heat source	On list for replacement
	Window shading	Window SF-ΔSHGC by building type, orientation, and heat source	

Category	Measure	Extension measures	Additional conditions
Lighting	CFLs	Lamp by hours of operation	Incandescent lamp use
	Daylighting controls	Window SF by building type	
	Exit signs	Exit sign count	Incandescent only
	Exterior lighting controls	W controllable	Uncontrolled fixtures only
	Occupancy sensors	SF controlled by building type	
	New generation T-8 lamps	SF by building type	
Equipment	Plug load controllers	SF by building type	Buildings without watt stoppers
	High-efficiency appliances	Appliance count	
HVAC	AC tune-ups	Ton AC by building type, heat source, thermostat type	
	Evaporative cooling	SF by building type and heat source	
	HVAC replacement	Ton AC by building type and heat source	On list for replacement
Controls	Economizers with demand controlled ventilation	Ton AC by building type and heat source	Single package rooftops only
	Central HVAC scheduling and control	Ton AC by building type and heat source	
Water	Automated faucets	Sink count	
	Faucet aerators	Sink count	
	Low flow shower heads	Shower count	
	Low flush toilet, urinal	Urinal, WC count	
	Waterless urinal	Urinal count	
Water heating	Service hot water tank/pipe insulation	Per building	

Data Collection Plan

Besides the extension measures listed above, other data are required to conduct the ECM analysis. These data were compared to the existing data resources to define the data requirements for the general building onsite surveys. The list of measures along with the data requirements for ECM analysis is shown in Table 5:

Table 5. ECM Analysis Data Requirements

Category	Measure	Data element	Source
Shell	Cool roof, roof insulation at replacement, radiant barrier	Insulation location	Onsite survey

Category	Measure	Data element	Source
		Roof condition	Deficiency list
		Roof replacement status	Deficiency list
		Roof R-value	Plans
		Roof SF	Site list
		Roofing material	Plans
	Infiltration sealing	Door seal	Onsite survey
		Infiltration rate	Secondary data
		Obvious infiltration sites	Onsite survey
		Window seal	Onsite survey
	Window replacement, shading	Frame type	Onsite survey
		Glass type	Onsite survey
		Seal condition	Onsite survey
		Existing shading	Onsite survey
		Window orientation	Onsite survey
		Window SF	Onsite survey
		Window condition	Deficiency list
Lighting	CFL	Incandescent lamp watts, count and operating hours	Onsite survey
	Exit signs	Incandescent exit sign count	Onsite survey
	Exterior lighting controls	Existing controls	Onsite survey
		Exterior light count	Onsite survey
		Lamp size	Onsite survey
	Occupancy sensors	Existing sensors	Onsite survey
		Space type	Onsite survey
	New generation T-8 lamps	Fixture type	Onsite survey
		Existing fixture lamp count	Onsite survey
		Existing fixture lamp type	Onsite survey
Equipment	Plug load controllers	Leave on at night?	Onsite survey
		Number of PCs	Onsite survey
	High-efficiency appliances	Appliance type and size	Onsite survey
HVAC	AC tune-ups	Age	MEL database
		Conditioned SF	Site list
		Thermostat type	Onsite survey
		Heat source	Manufacturers' data
		Number of units	MEL database
		Unit size	MEL database
	Evaporative cooler, HVAC replacement	Existing unit make and model number	Onsite survey

Category	Measure	Data element	Source
		Condition	Deficiency report
		Heat source	Manufacturers' data
		Existing unit size	MEL database
		Existing unit efficiency	Manufacturers' data
Controls	Economizer with demand controlled ventilation	Heat source	Manufacturers' data
		Number of units	MEL database
		Unit size	MEL database
	Central HVAC scheduling and control	Current cooling/heating/fan schedule	Onsite survey
		Number of units	MEL database
		Unit size	MEL database
Water	Automated faucets	Sink count	Onsite survey
		Sink use	Onsite survey
	Faucet aerators	Sink count	Onsite survey
		Sink use	Onsite survey
	Low flow shower heads	Frequency of use	Onsite survey
		Shower count	Onsite survey
	Low flush toilet, urinal	Flush volume	Onsite survey
		Toilet/urinal count	Waste inventory
		Type	Waste inventory
Water heating	Service hot water tank/pipe insulation	Existing tank insulation	Onsite survey
		Existing pipe insulation	Onsite survey
		SHW fuel	Onsite survey
		SHW type	Onsite survey
		Tank size	Onsite survey

Building Types and Model Building Selection

The site list database was used to develop the building type categories for the study. The building type (modular or trailer), predominant use, and overall square footage were used to develop study classifications. The building type classifications were chosen to represent the dominant building types, while considering the unique characteristics of each classification that can affect the performance of the energy conservation measures. The following building type classifications were established:

- Classroom/conference. Buildings characterized by intermittent occupancy and high occupant densities.
- Communications/computer. Buildings characterized by long or continuous occupancy and heavy internal loads from computer and communications equipment.

- Food/Retail. Buildings with special lighting, retail fixture, and/or food service equipment requirements.
- Library. Several library buildings are in the study, with unique water loop heat pump HVAC systems.
- Locker/Exercise. Buildings with long operating hours but intermittent occupancy, with special internal load conditions and water use characteristics.
- Office – Modular. Office occupancies that were classified as "modular" buildings. Modular buildings are defined as those constructed from prefabricated sections delivered by flat bed truck.
- Office – Trailer. Office occupancies that were classified as "trailer" buildings. Trailer buildings are defined as those constructed from prefabricated sections with integral wheels. Trailers may be single units or large buildings constructed from multiple sections.
- Shop/Lab. Workshop and laboratory support buildings with unique internal equipment. Most true laboratories are housed in permanent structures, but a few laboratory support buildings were included in the study.
- Storage. Buildings characterized by low internal gains and lighting levels. Conditioned and unconditioned storage buildings are combined into this category; HVAC measures were applied to conditioned buildings only.

General statistics compiled from the site list database are summarized in Table 6:

Table 6. Building Type Classification

Study classification	Total SF	Modular	Trailer	Total	Average size (sf)
Classroom/conference	26,383	4	4	8	3,298
Communications/computer	15,507	3	2	5	3,101
Food/Retail	25,251	3	1	4	6,313
Library	31,405	4	0	4	7,851
Locker/Exercise	6,353	1	10	11	578
Office - Modular	345,280	39	0	39	8,853
Office - Trailer	386,963	0	95	95	4,073
Shop/Lab	41,205	19	4	23	1,792
Storage	23,304	20	6	26	896

Building Audit Plan

The onsite data collection was conducted according to a three-tiered sampling plan, as shown in Figure 1. The model, or Level 3 audits, is at the top of the tier.

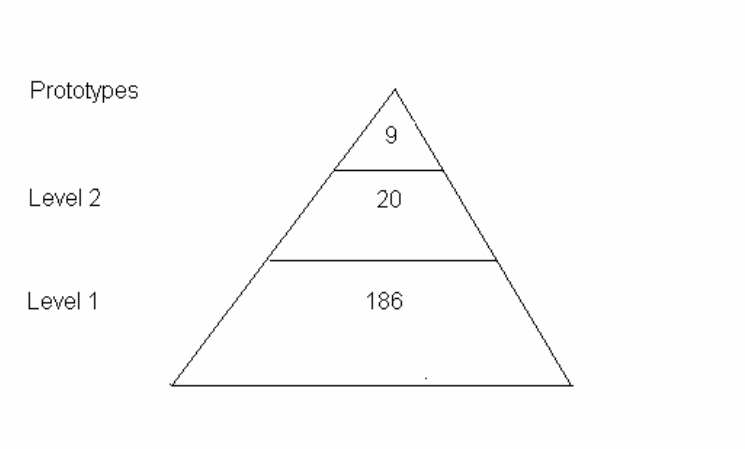


Figure 1. Sampling Plan

Level 1 Audits

Level 1 audits represent the most basic level of data collection. Level 1 data were collected at each site in the study. The data collected during the Level 1 audits are summarized below:

- Building type description.
- Building occupancy schedule.
- Number of thermostats, thermostat type.
- Window type, size and orientation.
- Window seal condition.
- Duct location, construction, insulation and condition.
- Roof insulation location.
- Uncontrolled exterior lighting.
- Incandescent exit sign count.
- Miscellaneous equipment counts (dishwashers, washers, dryers, under desk heaters, refrigerated vending machines, non-refrigerated vending machines, and refrigerators.
- Plumbing fixtures, including sinks and showers.
- Observations on exterior wall damage, watt stopper use, occupancy sensor opportunities and unusual conditions were recorded.

The Level 1 onsite survey form is shown in Appendix A.

Level 1 Audit Results

Data gathered from the Level 1 audits are summarized in the following sections.

Miscellaneous Equipment

The following graph shows the counts of miscellaneous equipment in the level one audits. Note the high penetration of water coolers, refrigerators and under desk heaters.

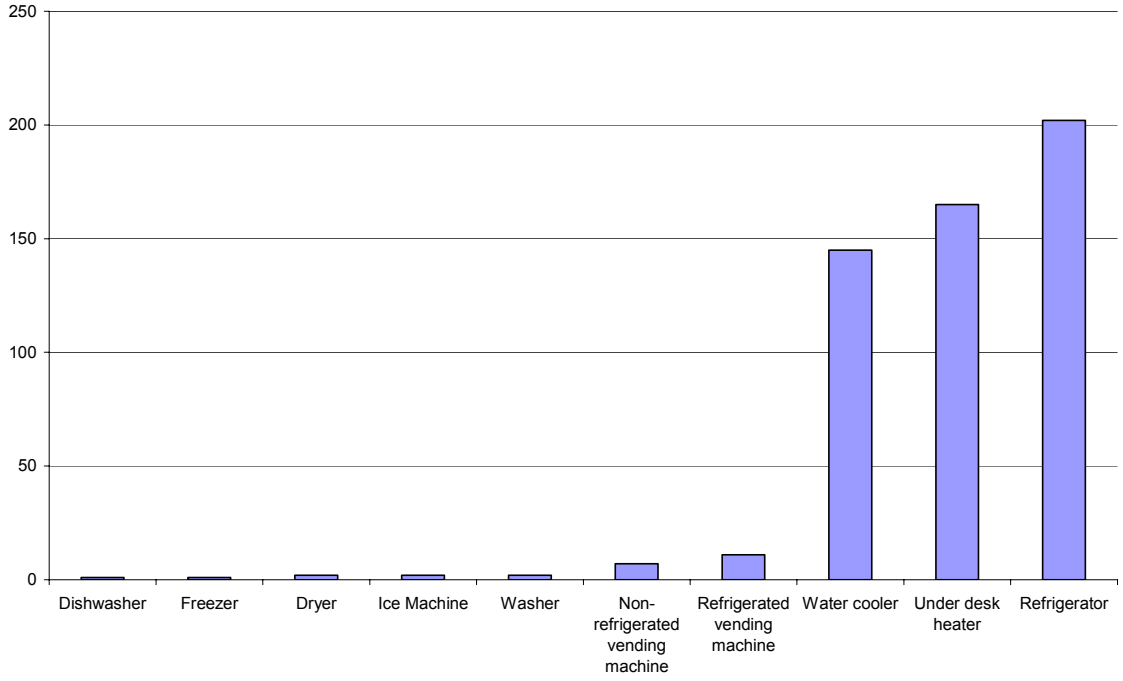


Figure 2. Miscellaneous Equipment Counts

Thermostat Types

Non-programmable thermostats represent nearly 60% of the installed thermostat base. The remaining programmable thermostats may or may not be correctly programmed (see Level 2 audit results).

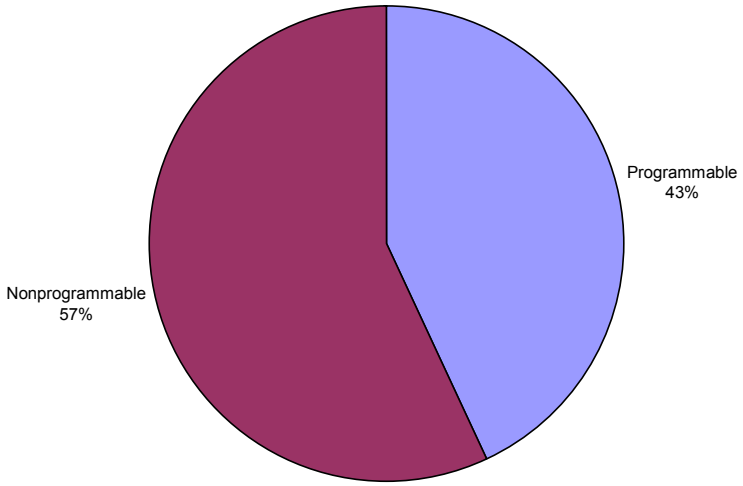


Figure 3. Thermostat Types

Window and Door Seals

Seals on operable windows were examined for degradation and air leakage potential. The frequency of seal condition is shown in Figure 4. Window seals in general were observed to be in good condition.

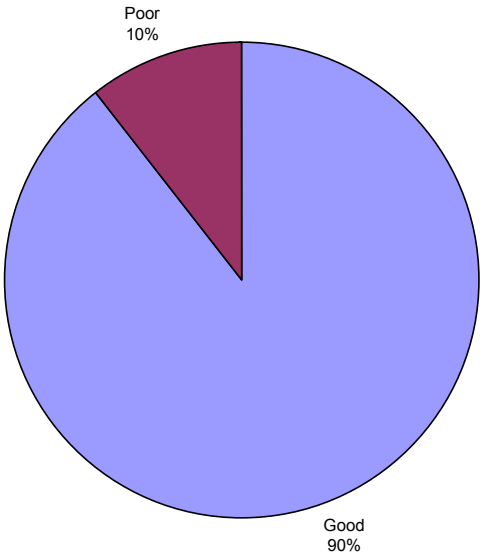


Figure 4. Window Seal Condition

Similarly, seals on doors were examined for degradation and air leakage potential. The frequency of door seal condition is shown in Figure 5. Door seals were observed to be in poor condition in 44% of the observations.

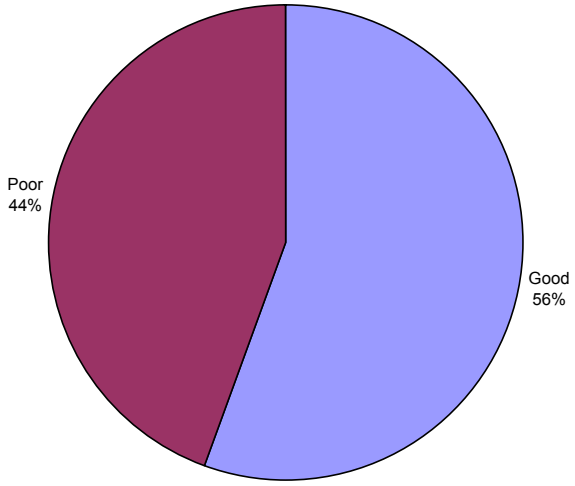


Figure 5. Door Seal Condition

Duct Systems

Duct systems were surveyed for potential energy savings through leakage sealing and insulation upgrades. The frequency of the supply duct type is shown in Figure 6.

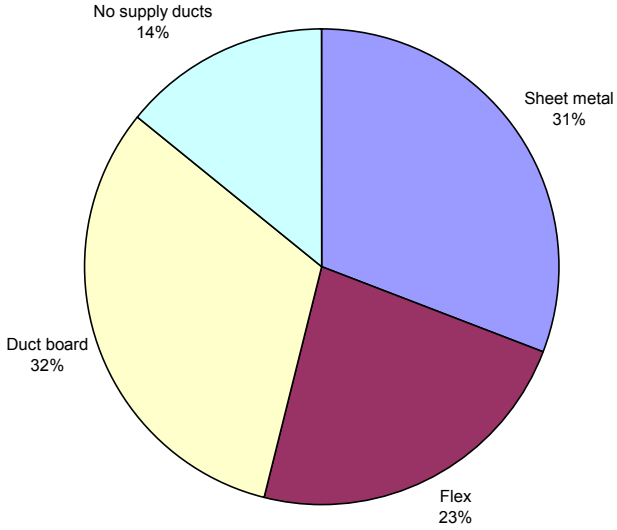


Figure 6. Supply Duct Type

The frequency of uninsulated ducts is shown in Figure 7. Note that most of the ducts were observed to have exterior insulation. Ducts observed without exterior insulation may have internal duct liners.

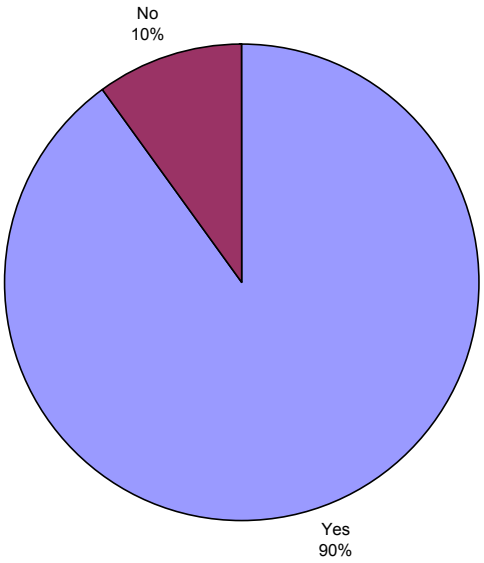


Figure 7. Frequency of Supply Duct Insulation

Duct systems were examined for gross leakage potential through a physical inspection. The observations are shown in Figure 8. Note that most of the duct systems were observed to be in good condition. However, physical condition is not generally indicative of duct leakage rate; only gross problems with duct systems can be detected from a physical inspection.

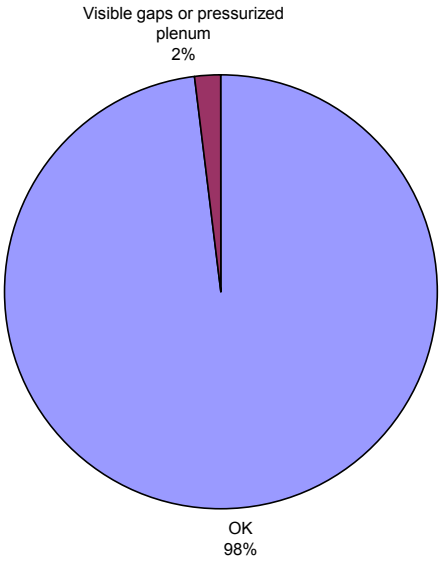


Figure 8. Supply Duct Visible Condition

Return ducts were also examined for leakage and insulation potential. Return systems can have significant leakage. When these systems are located outside of the thermal envelope of the building, they can draw unconditioned air into the HVAC system, thereby increasing HVAC loads. The location of returned ducts is summarized in Figure 9.

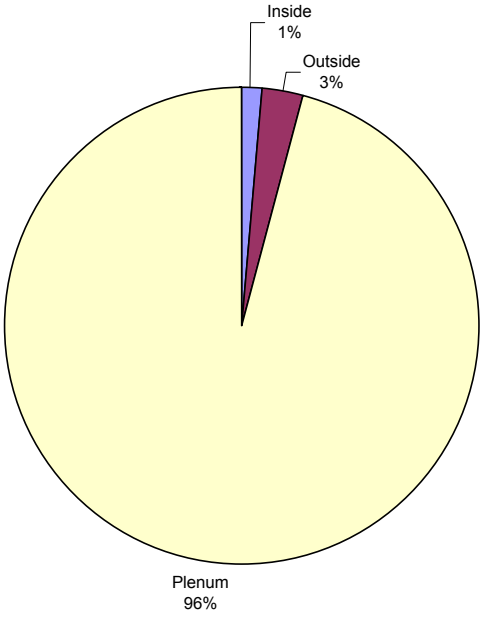


Figure 9. Return Duct Location

Note, nearly all of the return duct were located in the ceiling plenum. A few return systems were exposed (denoted as "inside"), while only 3% of the ducts were located outdoors. Return duct construction observations are shown in Figure 10. Note, most of the return systems are unducted – that is, the space between the ceiling tiles and the roof deck is used as a return plenum.

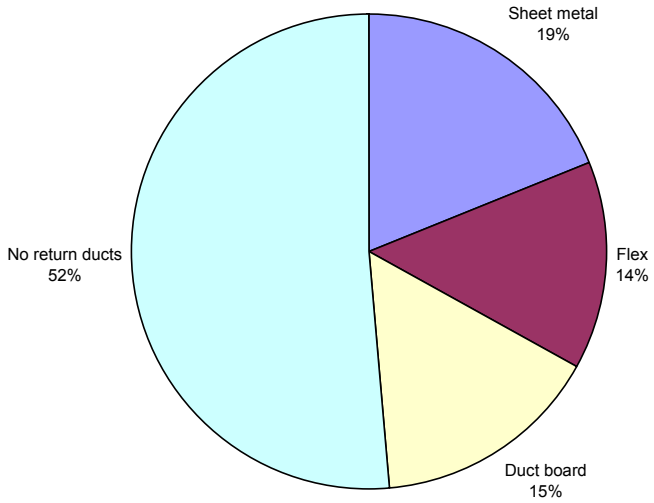


Figure 10. Return Duct Type

Ducts, where they exist, generally use exterior insulation, as shown in Figure 11.

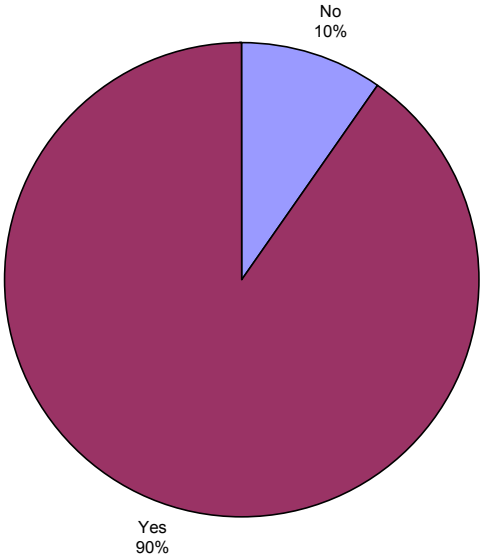


Figure 11. Frequency of Return Duct Insulation

In almost every case, the roof insulation was attached to the roof deck, placing the plenum space within the thermal envelope of the building, as shown in Figure 12.

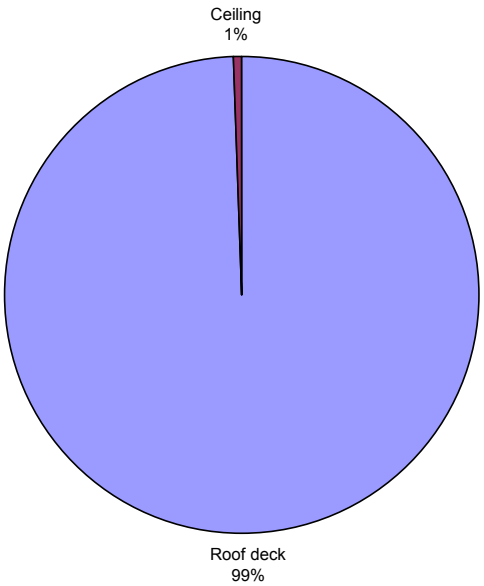


Figure 12. Roof Insulation Location

The conclusion from the duct system survey is that most ducts are located within the thermal envelope of the building and insulated. Thus, duct leakage sealing is not expected to be effective in these buildings.

Glass Types

Glazing systems were inspected and classified based on the glass type (clear, tinted, or reflective) and the number of panes. The distribution of glass types is shown in Figure 13.

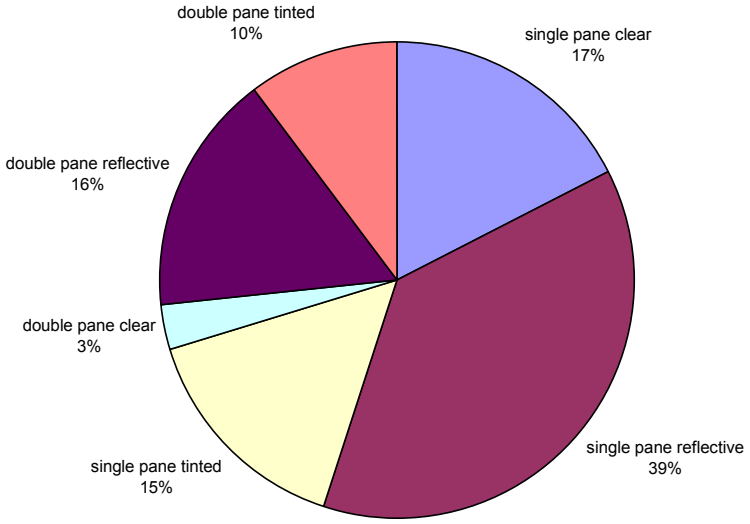


Figure 13. Glass Types Surveyed

Note that single pane glass represents about 70% of the glazing systems surveyed. Reflective glass is the most popular glazing material.

Sinks and Showers

Each lavatory sink and shower was surveyed for water conservation measure potential. Note, virtually all of the sinks surveyed were equipped with aerators. However, less than 25% of the showers had low flow showerheads, indicating significant potential for water savings.

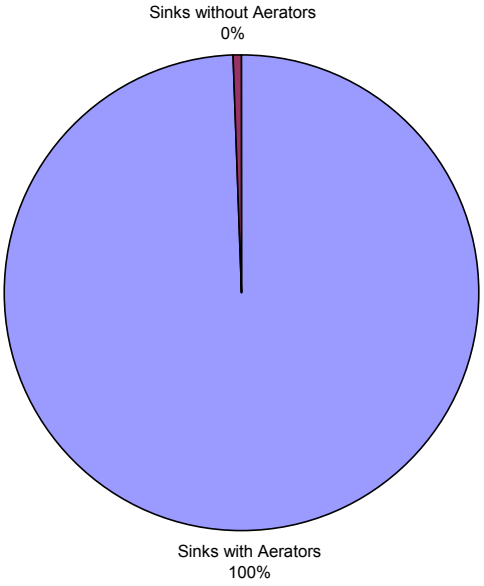


Figure 14. Penetration of Sink Aerators

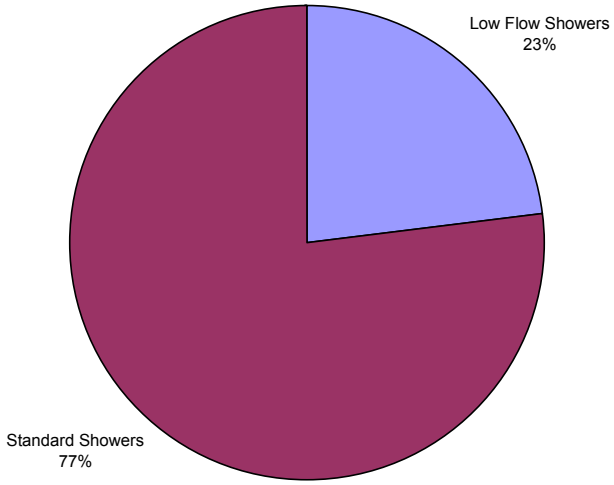


Figure 15. Penetration of Low Flow Showerheads

Level 2 Audits

A sample of buildings was selected for more detailed data collection on characteristics that were too detailed to collect at each site, but required a larger sample size than the planned sample size for the Level 3 audits. Additional data collected during the Level 2 audits included:

- Thermostat setpoints, setback schedule, and fan operation.

- Window frame material, measured visible transmittance, interior shading and exterior shading.
- Water heater type, size, insulation and fuel.

The level 2 onsite survey form is shown in Appendix B. A sample of 20 buildings was selected at random according to the sampling plan shown in Table 7.

Table 7. Level 2 Audit Sampling Plan

Study classification	Number of sites sampled	Building(s) selected.
Classroom/conference	1	2777
Communications/computer	1	6178
Food/Retail	1	
Library	1	1602
Locker/Exercise	1	519A
Office - Modular	5	1526, 1579, 625, 612A, 164
Office - Trailer	7	4180, 2180, 1826, 5125, 5985, 2728, 2687
Shop/Lab	2	1553, 6870
Storage	1	1879

Surveyors from RLW Analytics (Sonoma, CA) conducted onsite data collection for Level 1 and Level 2 sites during a period from February through March 2004. Sites classified as "Property Protected" were fairly easy to gain access to and survey. Sites with higher levels of security required escorts and a somewhat complicated coordination and scheduling process. We were not able to gain access to a few sites, but this was not considered to be a serious problem for the analysis, as sufficient data are available on other similar buildings. Level 1 and Level 2 surveys data were collected on paper survey forms and transferred to a Microsoft Access database constructed for this project. The populated Microsoft Access database containing the onsite survey data is provided on a CD along with this deliverable. A summary of the onsite survey status is shown in Appendix A.

Level 2 Data Collection Results

The results of the Level 2 data collection are shown in the following sections.

Glazing Systems Results

Glazing systems were surveyed to get a better idea of the frame material, solar transmittance as a function of the observed glass type, and the use of interior blinds. All of the frames surveyed were non-thermally broken aluminum and all were equipped with interior blinds. The window glazing type and number of panes were observed, and the solar transmittance was measured using a LiCor solar radiation meter. Solar radiation was measured inside and outside of the glass, and the transmittance was calculated as the ratio of the interior to exterior measured solar

radiation. The distribution of the measure transmission by glass type is shown in Figure 16 for single pane windows.

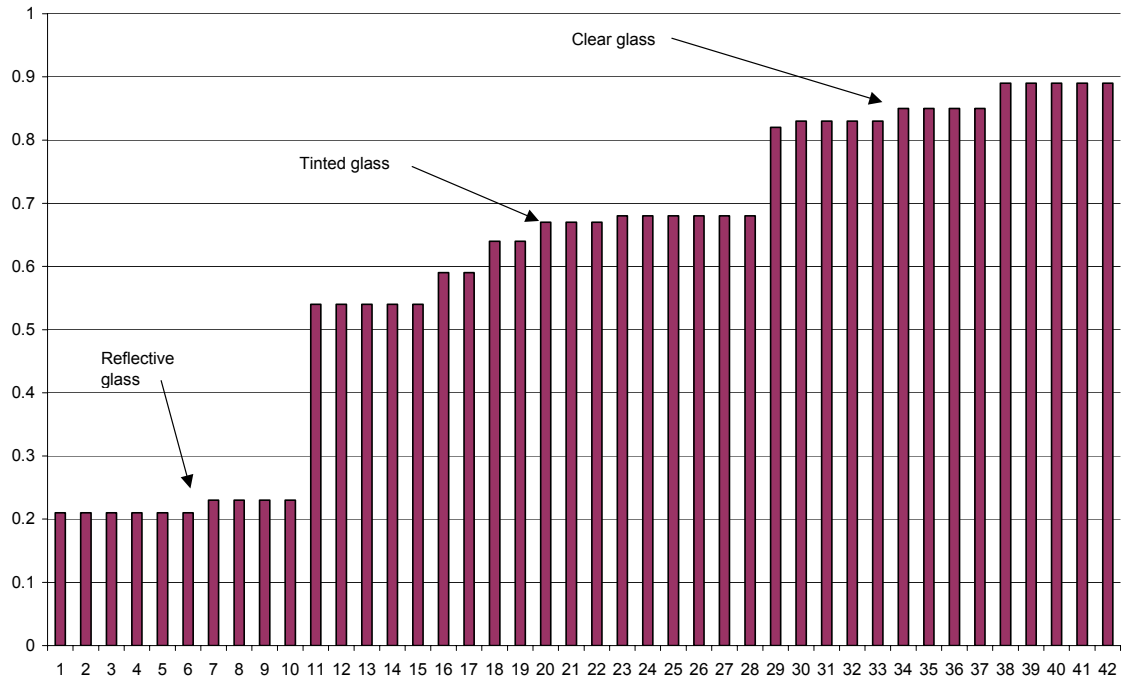


Figure 16. Single Glazing Measured Solar Transmittance

These data were averaged for each glass type, and a solar heat gain coefficient (SHGC) and shading coefficient (SC) was assigned based on the glass type and average transmission using data from the Fenestration chapter of the ASHRAE Handbook of Fundamentals. These data are summarized in Table 8.

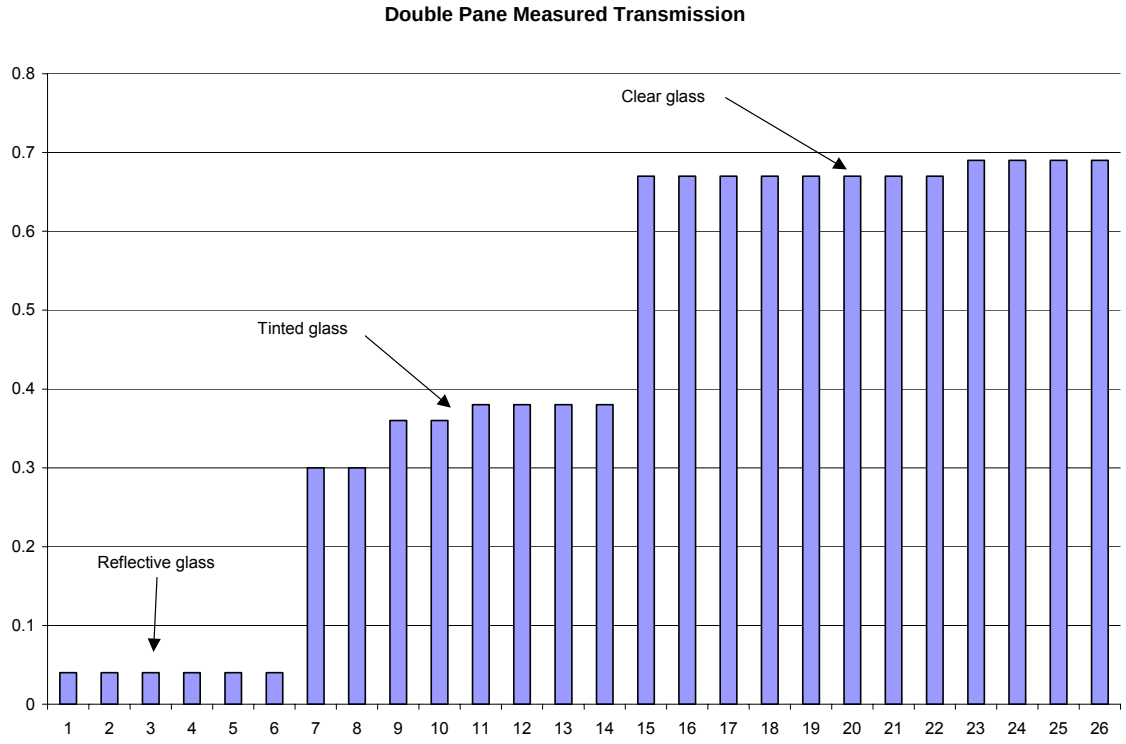


Figure 17. Double Glazing Measured Solar Transmittance

Assigned glazing properties, based on the survey observations are summarized in the Table below:

Table 8. Assigned Glazing Optical Properties

Panes	Glass Type	average meas trans	Est SHGC	Est SC
1	Reflective	0.22	0.35	0.40
1	Tinted	0.63	0.64	0.74
1	Clear	0.86	0.71	0.82
2	Reflective	0.04	0.13	0.15
2	Tinted	0.36	0.42	0.48
2	Clear	0.68	0.65	0.75

The presence of additional exterior shading from overhangs, adjacent buildings, or trees was also observed. Note that nearly 90% of the windows were observed to be in full sun.

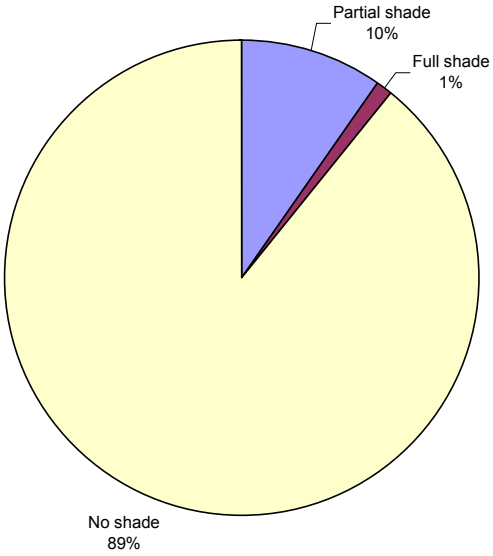


Figure 18. Window Exterior Shading

Thermostats in the Level 2 buildings were surveyed to determine how the indoor (supply fan) controls are being set. Thermostats generally have a switch that controls indoor fan operation that is accessible to the user. When this switch is set to "auto," the fans cycle with a call for heating and cooling. When it is set to "on," the fans run continuously. Ventilation standards for commercial buildings require continuous ventilation air during occupied periods, thus thermostats set to "auto" will not provide continuous ventilation air and will not meet ventilation standards. The observed fan control settings are shown in Figure 19.

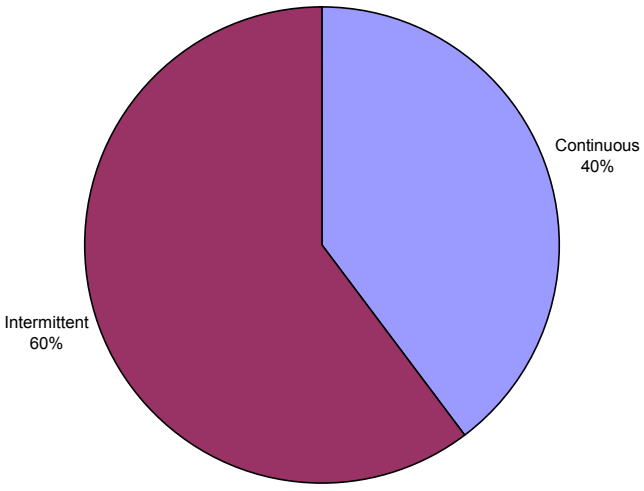


Figure 19. Observed Fan Mode at Thermostats

Note that 60% of the thermostats surveyed had the fan switch in the "auto" position, causing intermittent fan operation. This mode of operation does not provide continuous ventilation air.

Thermostat Setpoints

Thermostat setpoints for programmable and non-programmable thermostats were observed. The average values are shown in Table 9.

Table 9. Average Heating and Cooling Setpoints for Programmable and Non-Programmable Thermostats

Thermostat Type	HSP	HSB	CSP	CSB
Programmable	69	64	74	78
Non-programmable	69		74	

Note that the average observed heating and cooling setpoints for both programmable and non-programmable thermostats are the same. On average, programmable thermostats were set to return to normal temperatures one hour before occupancy and 1.3 hours after occupancy.

Water Heaters

Water heaters were observed to be a mixture of instantaneous and storage type electric water heaters, as shown in .

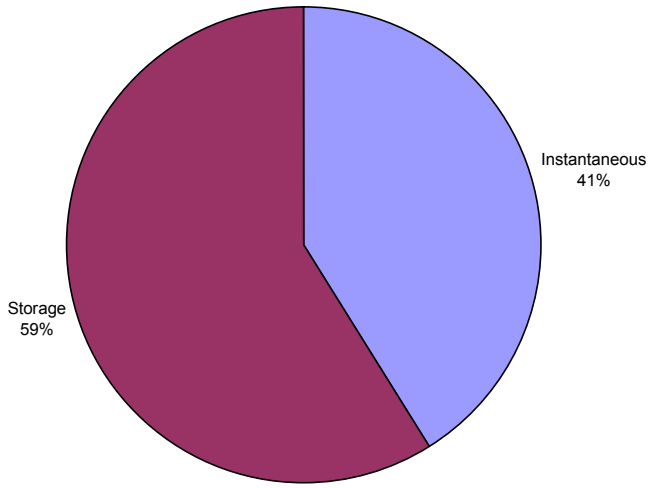


Figure 20. Water Heater Type

No tank wrap or pipe insulation was observed. Median tank size for storage type water heaters is 15 gal.; sizes for storage type water heaters range from one gallon to 120 gal.

Level 3 (Model Building) Audits

Detailed level 3 audits were conduced at a sample of buildings that represent each model/similar building type category. Complete building characteristics data sufficient to develop a detailed DOE-2 simulation model of the building were collected at each of the nine model buildings. The level 3 onsite survey form, which is based on the AEC/RLW SurveyIT onsite survey database, is shown in Appendix D. The sites selected for level 3 audits are shown in Table 10.

Table 10. Level 3 Audit Building Selection

Study classification	Site ID	Description	Size (sf)
Classroom/conference	2627	HC Classroom #2	1,867
Communications/computer	5976	Computer support	6,209
Food/Retail	4128	LLESA Store	960
Library	4727	TID Library	9,909
Locker/Exercise	2701/2787	Security shower and exercise	2,940
Office - Modular	3725	Office	19,815
Office - Trailer	1735	PAT	3,261
Shop/Lab	1602	Chemistry and Material Science	2,217
Storage	1886	Electronic Shop	3,643

Buildings were selected that are representative in size, not at the bottom or top of the range for building size in each respective category. To the extent possible, Level 3 buildings were chosen from the list of sites where billing data were available. The billing data were used to calibrate the DOE-2 models during Phase II of the project.

HVAC System Efficiency Testing

During the course of the onsite surveys, tests were conducted on a sample of HVAC units serving the "model" buildings. The testing included unit air flow, input power (kW), entering and leaving dry bulb and wet bulb temperatures, suction line superheat and liquid line subcooling. These data were used to identify problems with unit air flow and inadequate refrigerant charge; and to calculate the unit operating efficiency.

A device called a "flow grid" was used to measure the in-situ flow rate. A photo of a typical flow grid is shown in Figure 21.

Figure 21. Example of a Flow Grid Air Flow Measuring Device

Test data revealed that a number of units were operating with greatly reduced air flow and efficiency. Actions taken to reduce airflow at the supply registers to handle an apparent comfort problem have a significant effect on unit efficiency. A summary of the unit air flow and EER tests is shown in Figure 22.

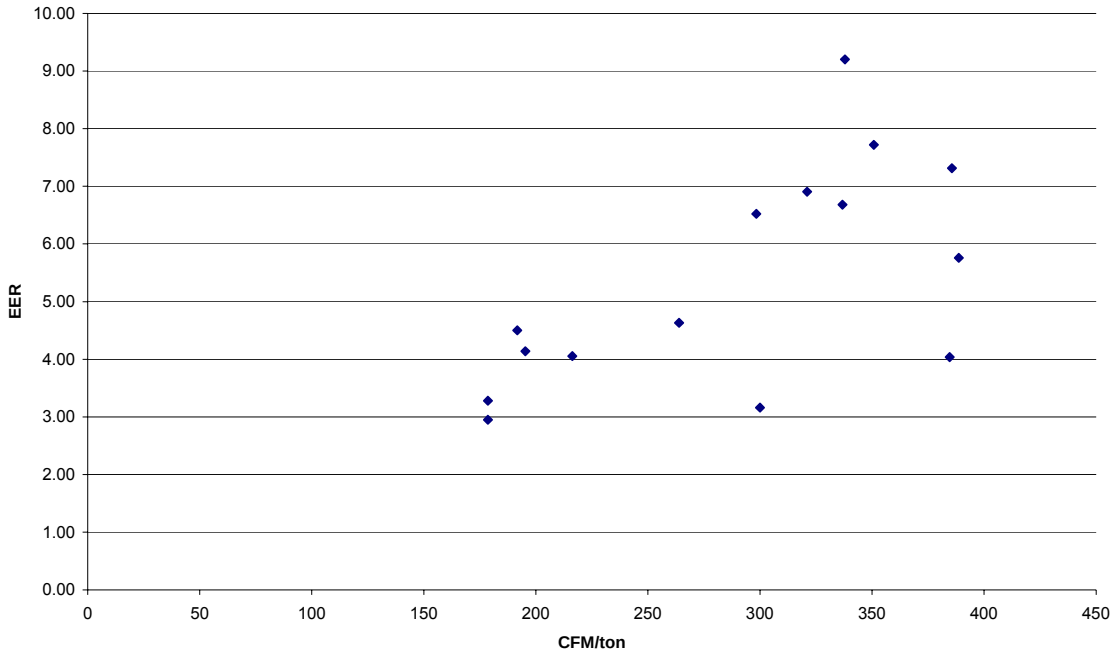


Figure 22. Air Flow and Efficiency Measurements for Sample HVAC Units

Measured air flow rates varied from 190 cfm/ton to 375 cfm/ton, with an average flow rate of 289 cfm/ton. Manufacturers generally rate units at 400 cfm/ton. In-situ EER (corrected to ARI standard conditions vary from a low of 3.0 to 9.2. A comparison of the measured to the rated EER is shown in Figure 23.

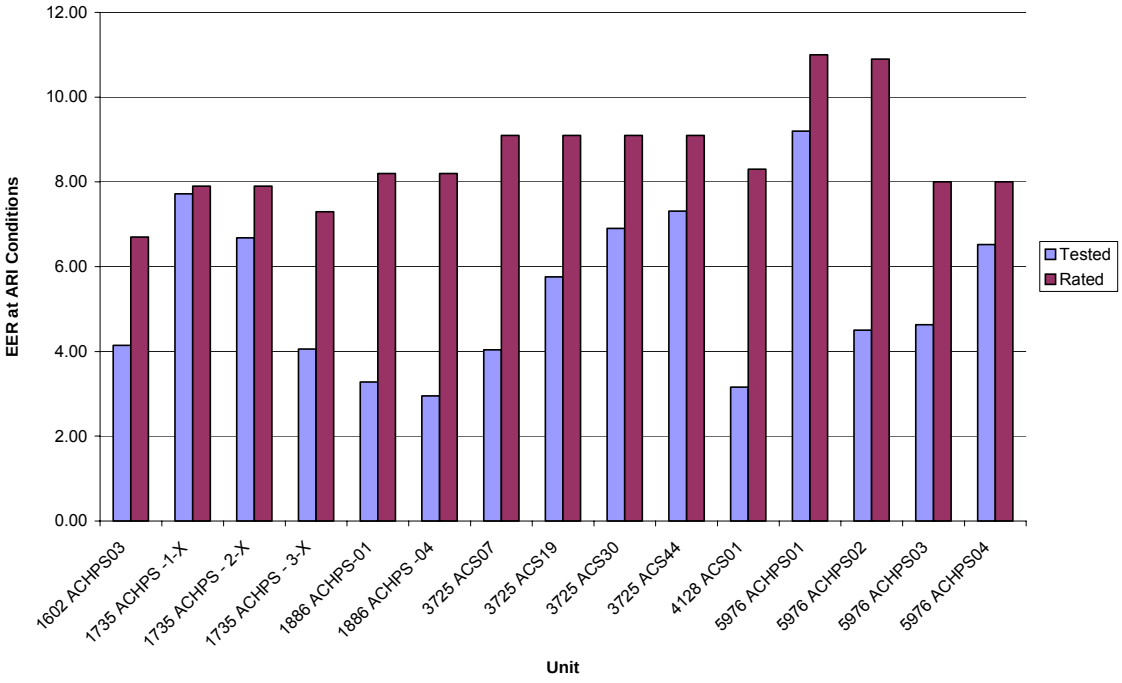


Figure 23. Comparison of Measured vs. Rated Efficiency of Tested Units

The average ratio of the measured to rated EER is 0.63; meaning that the units are running on average at about 37% lower efficiency than their rated value. The measured cooling capacity (corrected to ARI standard conditions) is compared to the rated capacity in Figure 24.

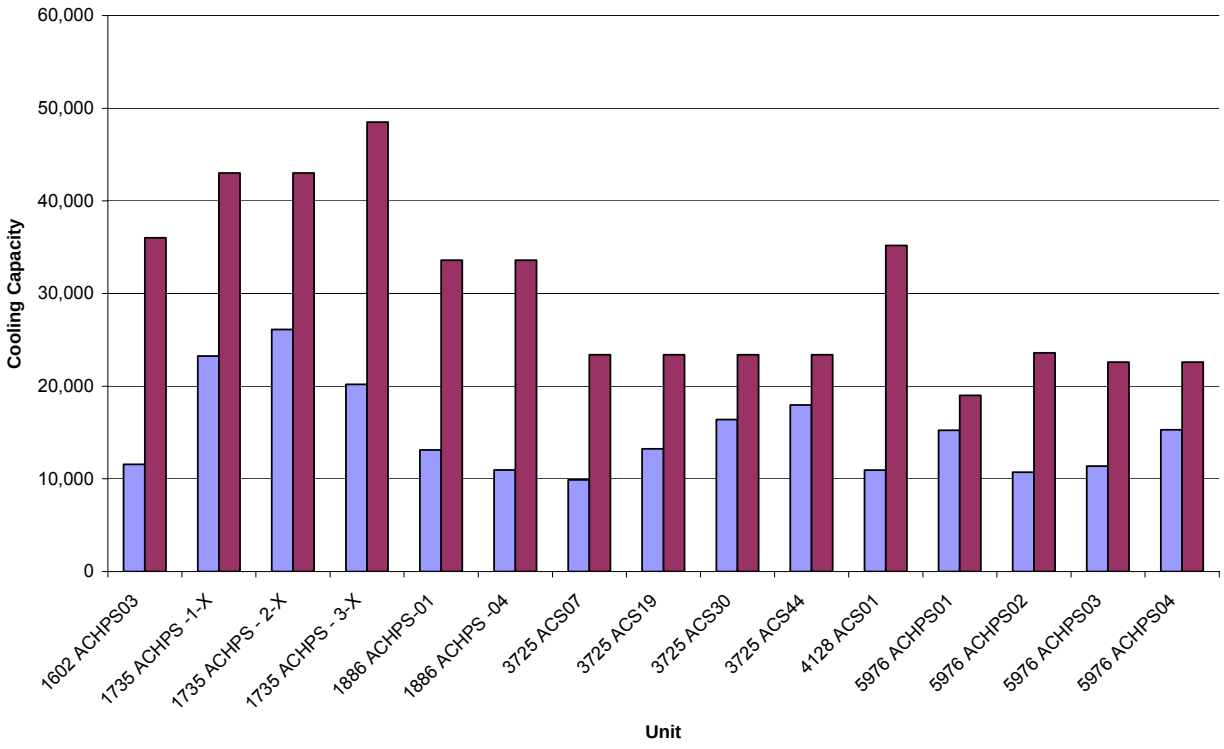


Figure 24. Comparison of Measured vs. Rated Capacity of Tested Units

The average ratio of the measured to rated capacity is 0.49; meaning the units, on average, put out slightly less than one half of their rated output.

The rated capacity, air flow, and efficiency of each of the HVAC units were adjusted according to the test results. Adjustments were made uniformly to each unit, based on the average values of the tested conditions.

Table 11. HVAC Unit Field Test Data

Blg	Unit	Make	Model	EER	Unit Capacity (Btu/hr)	Measured Air Flow (cfm)	Unit Capacity (tons)	CFM/ ton	Entering Air RH (%)	Entering Tdp (F)	Entering Enthalpy (BTU/lb)	Entering/ Leaving Humidity Ratio (lb/lb)	Leaving Enthalpy (BTU/lb)	Cooling Capacity (BTU/h)	Power (kw)	EER
1602	ACHPS03	BARD	36WA3	6.7	36,000	586	3.0	195.3	17.9%	31.1	23.05	0.0037	18.67	11,561	2.51	4.6
1735	ACHPS -1-X	GE	BWC042C300DI	7.9	43,000	1,257	3.6	350.8	41.6%	46.6	24.34	0.0067	20.23	23,252	2.71	8.6
1735	ACHPS - 2-X	GE	BWC042C300DI	7.9	43,000	1,207	3.6	336.8	39.1%	42.2	22.5	0.0057	17.69	26,130	3.03	8.6
1735	ACHPS - 3-X	GE	BWC048C300DI	7.3	**48,500**	**874**	4.0	**216.2**	40.8%	45.2	23.72	0.0063	18.58	20,210	3.93	5.1
1886	ACHPS-01	BARD	MHP36AA05C	8.2	33,600	500	2.8	178.6	33.4%	49.6	27.66	0.0075	21.83	13,124	3.7	3.5
1886	ACHPS -04	BARD	MHP36AA050	8.2	33,600	500	2.8	178.6	34.0%	47.4	26.29	0.0069	21.42	10,961	3.9	2.8
3725	ACS07	Trane	TCC024F100BD	9.1	23,400	750	2.0	384.6	48.3%	49.6	25	0.0075	22.07	9,887	1.83	5.4
3725	ACS19	Trane	TCC024F100BD	9.1	23,400	758	2.0	388.7	46.8%	47.0	23.73	0.0068	19.85	13,229	1.94	6.8
3725	ACS30	Trane	TCC024F100BD	9.1	23,400	626	2.0	321.0	37.1%	46.2	24.97	0.0066	19.15	16,397	2.09	7.8
3725	ACS44	Trane	TCC024F100BD	9.1	23,400	752	2.0	385.6	39.4%	50.5	26.98	0.0078	21.67	17,982	2.07	8.7
4128	ACS01	Marvair	AVP36HPA05N-1000G1	8.3	35,200	900	2.9	300.0	62.1%	52.7	25.02	0.0084	22.32	10,945	3	3.6
5976	ACHPS01	Bard	WH151A04	11	19,000	535	1.6	337.9	23.0%	42.0	25.4	0.0054	19.06	15,260	1.56	9.8
5976	ACHPS02	Bard	WH241A04XX4XXX	10.9	23,600	377	2.0	191.7	30.0%	41.2	23.69	0.0054	17.36	10,731	1.88	5.7
5976	ACHPS03	Marvair	AVP24HPA04N-1000BI	8	**22,600**	497	1.9	**263.9**	25.2%	39.6	24.3	0.0051	19.22	11,361	1.99	5.7
5976	ACHPS04	Marvair	AVP24HPA04N-1000BI	8	**22,600**	562	1.9	**298.4**	28.1%	42.4	24.95	0.0057	18.90	15,296	1.98	7.7
AVG								**289**								

Table 12. HVAC Unit Field Test Data (additional)

Blg	Unit	Make	Model	EER	Unit Capacity (Btu/hr)	Condenser Entering Temp (F)	Entering wet bulb	EER at ARI conditions	Capacity at ARI conditions	EER mult	cap mult
1602	ACHPS03	BARD	36WA3	6.7	36,000	82.6	55	4.1	10,234	0.62	0.28
1735	ACHPS -1-X	GE	BWC042C300DI	7.9	43,000	82.8	57	7.7	21,172	0.98	0.49
1735	ACHPS - 2-X	GE	BWC042C300DI	7.9	43,000	72	54	6.7	24,069	0.85	0.56
1735	ACHPS - 3-X	GE	BWC048C300DI	7.3	**48,500**	73	56	4.1	19,061	0.56	0.39
1886	ACHPS-01	BARD	MHP36AA05C	8.2	33,600	86	62	3.3	12,683	0.40	0.38
1886	ACHPS -04	BARD	MHP36AA050	8.2	33,600	96	60	3.0	9,762	0.36	0.29
3725	ACS07	Trane	TCC024F100BD	9.1	23,400	68.8	58	4.0	9,808	0.44	0.42
3725	ACS19	Trane	TCC024F100BD	9.1	23,400	78	56	5.8	12,164	0.63	0.52
3725	ACS30	Trane	TCC024F100BD	9.1	23,400	81.2	58	6.9	15,278	0.76	0.65
3725	ACS44	Trane	TCC024F100BD	9.1	23,400	78	61	7.3	17,816	0.80	0.76
4128	ACS01	Marvair	AVP36HPA05N-1000G1	8.3	35,200	80	58	3.2	10,260	0.38	0.29
5976	ACHPS01	Bard	WH151A04	11	19,000	86.4	58	9.2	13,847	0.84	0.73
5976	ACHPS02	Bard	WH241A04XX4XXX	10.9	23,600	73	56	4.5	10,121	0.41	0.43
5976	ACHPS03	Marvair	AVP24HPA04N-1000BI	8	22,600	75	57	4.6	10,763	0.58	0.48
5976	ACHPS04	Marvair	AVP24HPA04N-1000BI	8	22,600	78	58	6.5	14,485	0.82	0.64
AVG										0.63	0.49

A summary of the characteristics of each model building is shown in the following sections.

Building 1602

Building 1602 is a 2,088 square foot computer repair shop/laboratory. The floor plan is shown in Figure 25.

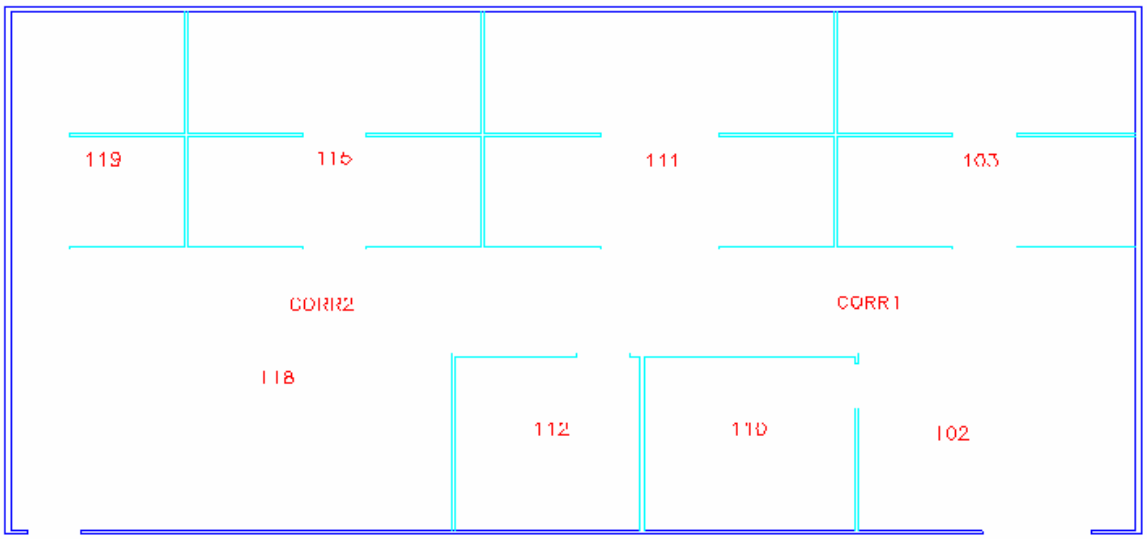


Figure 25. Building 1602 Floor Plan

An overall description of the energy-related building characteristics is shown in Table 13.

Table 13. Building 1602 Description

Model Parameter	Description
Shape	Rectangular, 36 feet x 58 feet
Conditioned floor area	2,088 sf
Number of floors	1
Floor-to-ceiling height	9 feet
Plenum height	2 feet
Exterior wall construction	Wood frame wall
Exterior wall R-Value	R-11 insulation
Window type	Single pane clear Measured solar trans = 0.857 SC = 0.95, U-value = 1.62
Window/wall ratio	12%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/A

Model Parameter	Description
Lighting power density, average	1.25 W/sf
Equipment power density, average	10.55 W/sf
Operating schedule	5:30 am – 6 pm M-F
Number of people	34
Outdoor air	15 cfm/person
HVAC system	Single package wall mount AC
Size	3 @ 3 tons each
CFM	867 cfm/system
Cooling Efficiency	4.2 EER
Economizer	No
Average thermostat setpoints	Heating: 70/64; Cooling: 71.5/71.5
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in Table 14.

Table 14. Building 1602 Baseline End-Use Electricity Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/SF)
8,838	21,419	5,342	27,816	4,368	67,783	32.5

The end-use energy consumption breakdown is shown in Figure 26.

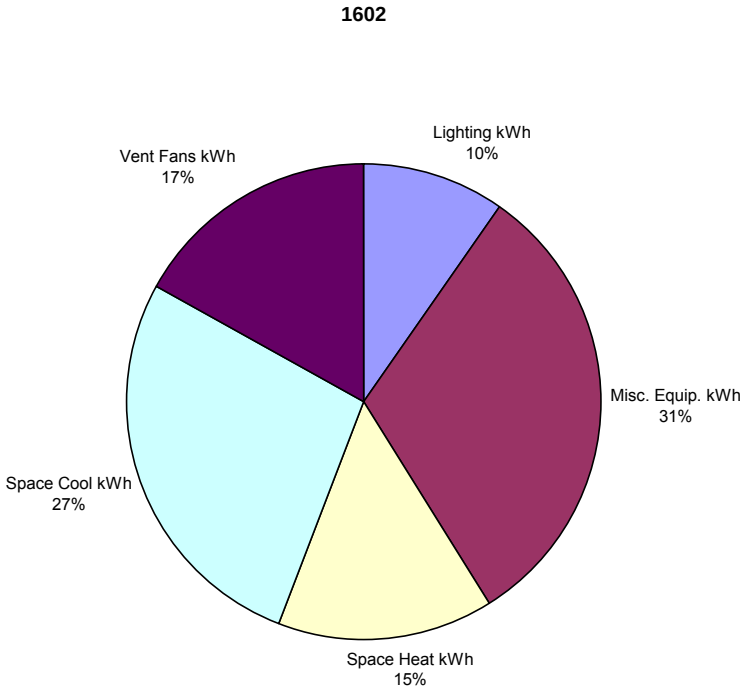


Figure 26. End-Use Electricity Consumption for Building 1602

Building 1735

Building 1735 is a 3,300 square foot office/trailer. The building floor plan is shown in Figure 27.

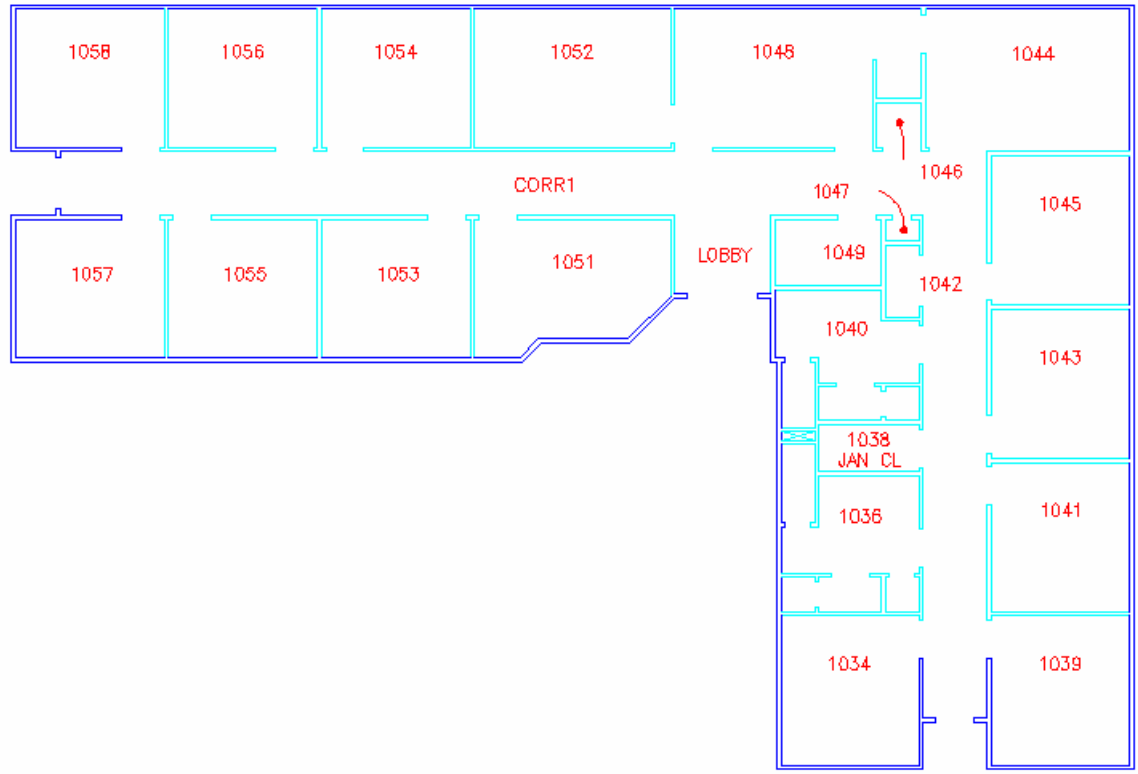


Figure 27. Building 1735 Floor Plan

A summary of the energy related building characteristics is shown in Table 15.

Table 15. Building 1735 Description

Model Parameter	Description
Shape	L-Shaped, 28 feet x 87 feet and 28 feet x 32 feet
Conditioned floor area	3,316 sf
Number of floors	1
Floor-to-ceiling height	8 feet
Plenum height	N/A
Exterior wall construction	Wood frame wall
Exterior wall R-Value	R-11 insulation
Window type	Double pane clear and reflective Clear – Measured solar trans = 0.67 SC = 0.85, U-value = 0.84

Model Parameter	Description
	Reflective - Measured solar trans = 0.22 SC = 0.3, U-value = 0.84
Window/wall ratio	26%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/A
Lighting power density, average	0.66 W/sf
Equipment power density, average	3.70 W/sf
Operating schedule	8 am – 6 pm M-F
Number of people	14
Outdoor air	15 cfm/person
HVAC system	Single package rooftop heat pump
Size	3 @ 3.5 tons
CFM	1100 cfm/system
Cooling Efficiency	4.8 EER
Economizer	No
Average thermostat setpoints	Heating: 66/66; Cooling: 73.5/73.5
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in Table 16.

Table 16. Building 1735 Baseline End-Use Electricity Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
7,740	24,579	11,645	21,319	13,430	78,713	23.7

The end-use energy consumption breakdown is shown in Figure 28.

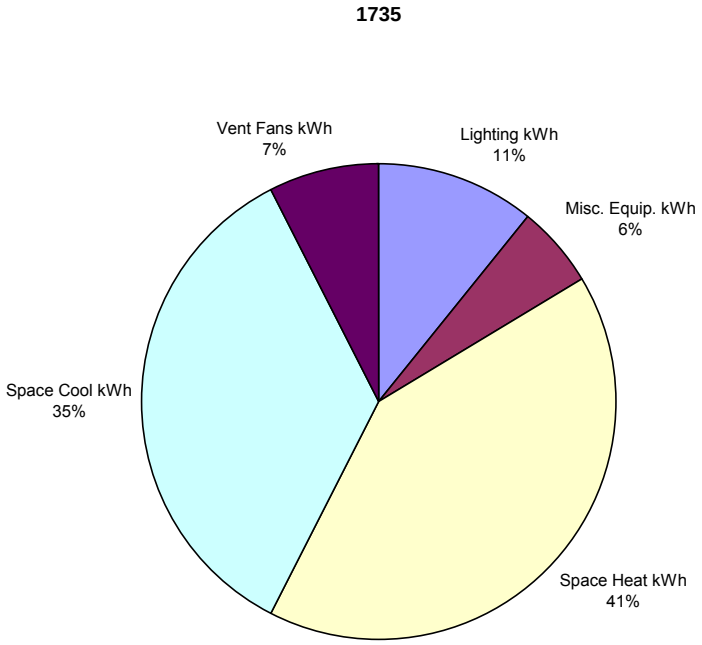


Figure 28. Building 1735 End-Use Energy Consumption Breakdown

Model Calibration

Metered electricity data specific to this site were available. The energy consumption predicted by the DOE-2 model was compared to metered data for this site. Model inputs were adjusted to improve the comparison. Note that the models were run with long-term average weather data for Sacramento, while the billing data represent the weather in Livermore over a particular period, thus the comparison is not expected to be exact. The calibration exercise is designed to identify any gross errors in the simulation model. The final model results vs. the billing data are shown in Figure 29.

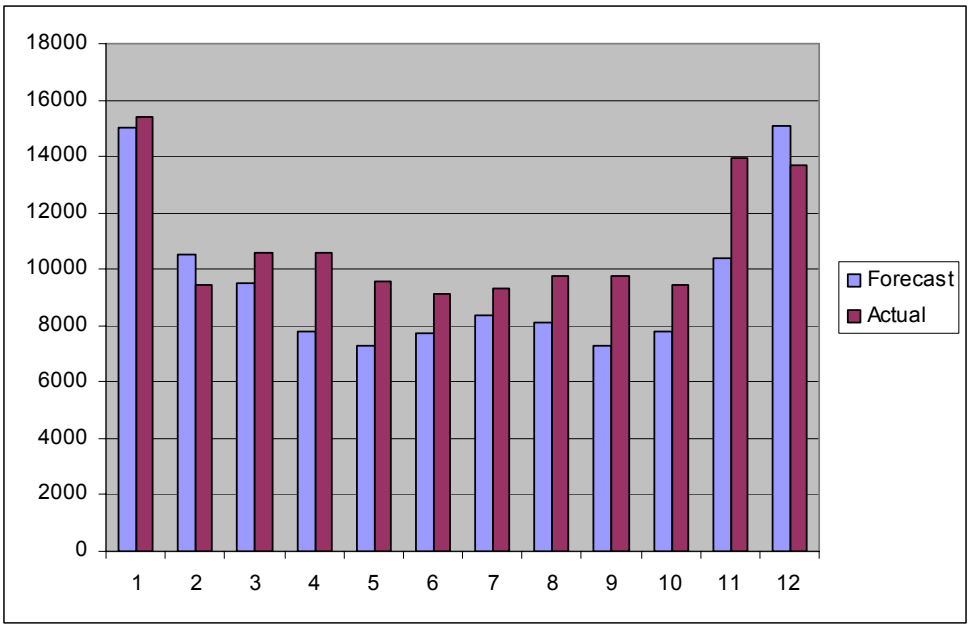


Figure 29. Building 1735 Model Calibration

Simulated annual energy consumption at this site matched the billing data within 11.9%.

Building 1886

Building 1886 is a 3,600 square foot telephone system storage building. The building floor plan is shown in Figure 30.

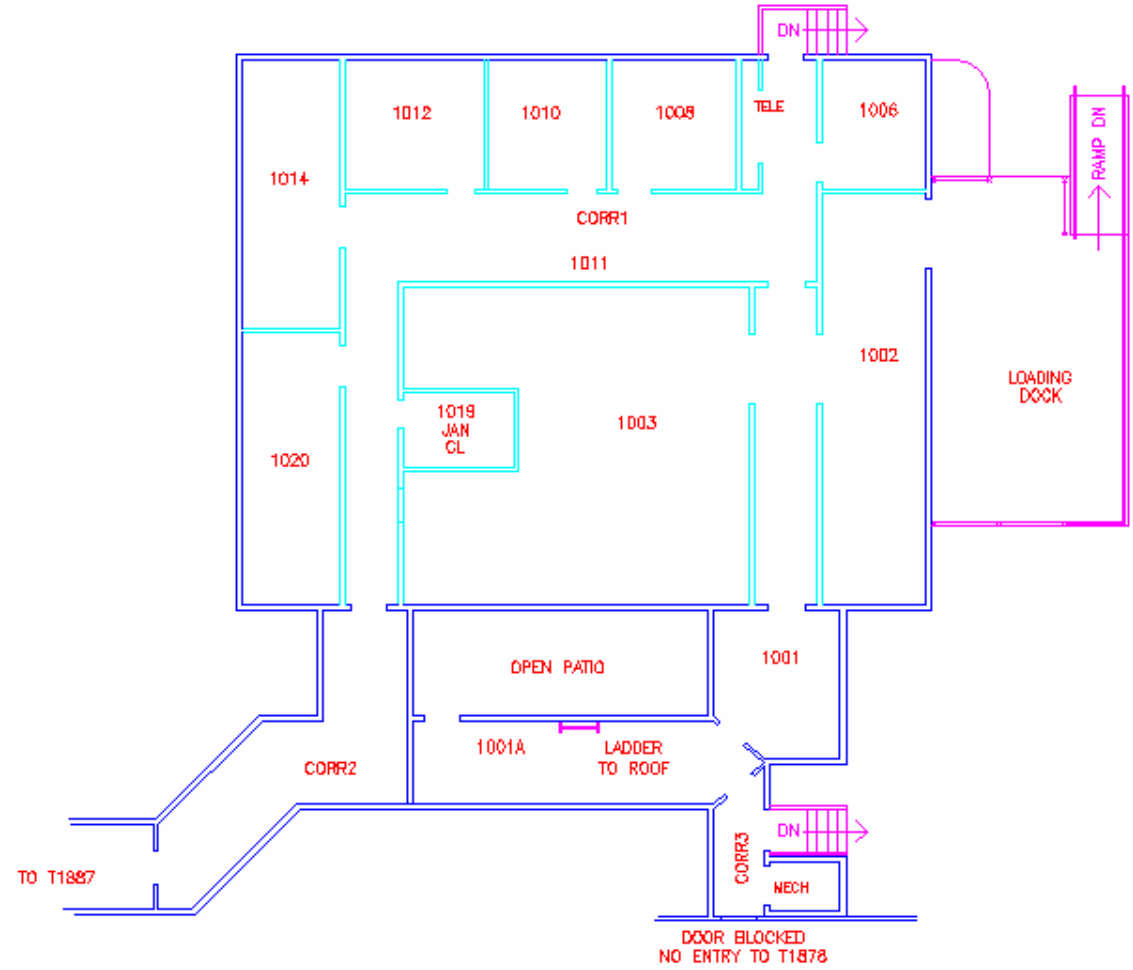


Figure 30. Building 1886 Floor Plan

A summary of the energy-related building characteristics is given in Table 17.

Table 17. Energy-Related Building Characteristics

Model Parameter	Description
Shape	Rectangular, 48 feet x 62 feet
Conditioned floor area	3,024 sf
Number of floors	1
Floor-to-ceiling height	8 feet
Plenum height	2 feet
Exterior wall construction	Wood frame wall

Model Parameter	Description
Exterior wall R-Value	R-11 insulation
Window type	Single pane clear and tinted Clear – Measured solar trans = 0.727 SC = 0.95, U-value = 1.62 Tinted – Measured solar trans = 0.497 SC = 0.68, U-value = 1.62
Window/wall ratio	27%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/A
Lighting power density, average	0.88 W/sf
Equipment power density. average	1.94 W/sf
Operating schedule	5 am – 5 pm M-F
Number of people	4
Outdoor air	15 cfm/person
HVAC system	Single package wall mount heat pump
Size	4 @ 1.5 tons
CFM	4 @ 600 cfm/system
Average Measured Efficiency	5.2 EER
Economizer	No
Average thermostat setpoints	Heating: 70/70; Cooling: 72/72
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in Table 18.

Table 18. Building 1886 Baseline End-Use Energy Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
11,174	5,834	42,458	36,190	7,674	103,330	34.2

The end-use energy consumption breakdown is shown in Figure 31.

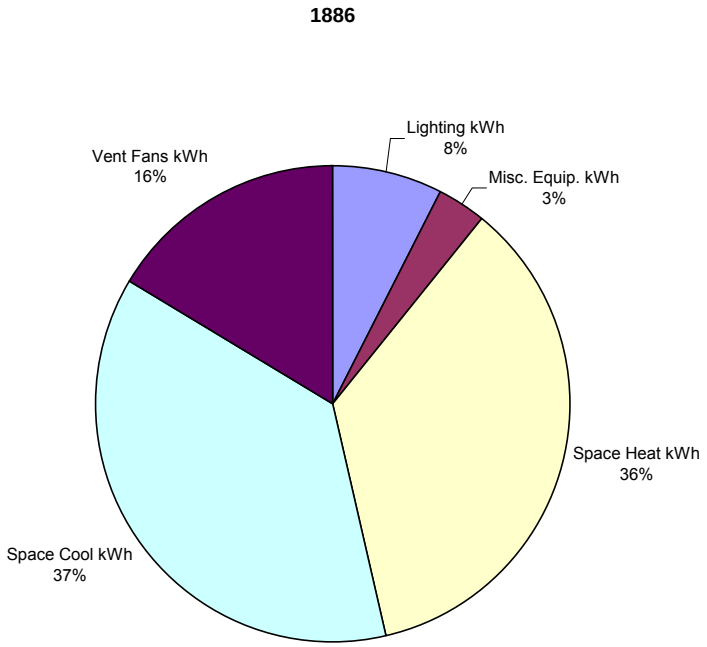


Figure 31. Building 1886 End-Use Energy Consumption Breakdown

Building 2627

Building 2627 is a 1,800 square foot classroom building. The building floor plan is shown in Figure 32.

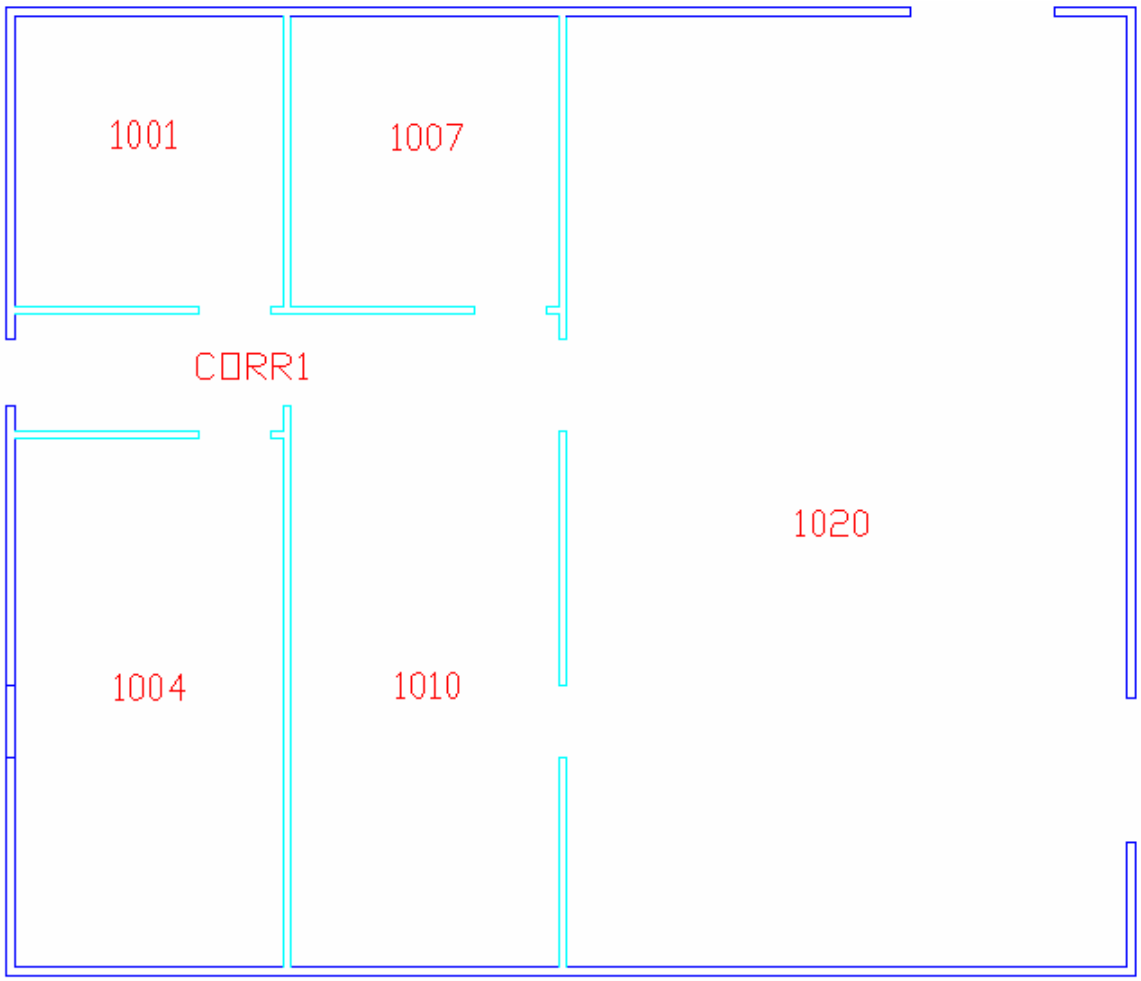


Figure 32. Building 2627 Floor Plan

A summary of the energy-related building characteristics is shown in Table 19.

Table 19. Building 2627 Description

Model Parameter	Description
Shape	Rectangular, 36 feet x 38 feet
Conditioned floor area	1,824 sf
Number of floors	1
Floor-to-ceiling height	8 feet
Plenum height	1 feet
Exterior wall construction	Wood frame wall

Model Parameter	Description
Exterior wall R-Value	R-11 insulation
Window type	Single pane clear Measured solar trans = 0.674 SC = 0.95, U-value = 1.62
Window/wall ratio	8%
Roof construction	Wood frame roof with R-11 insulation
Roof reflectance	0.2
Ceiling construction	N/A
Lighting power density, average	0.81 W/sf
Equipment power density, average	1.095 W/sf
Operating schedule	7 am – 6:30 pm M-F
Number of people	1
Outdoor air	15 cfm/person
HVAC system	Single package wall mount air conditioner with electric heat
Size	4 @ 2 tons each
CFM	578 cfm/system
Cooling Efficiency	5.7 EER
Economizer	No
Average thermostat setpoints	Heating: 67/67; Cooling: 72/72
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in Table 20.

Table 20. Building 2627 End-Use Electricity Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
4,706	2,039	22,277	23,291	10,231	62,544	34.3

The end-use energy consumption breakdown is shown in Figure 33.

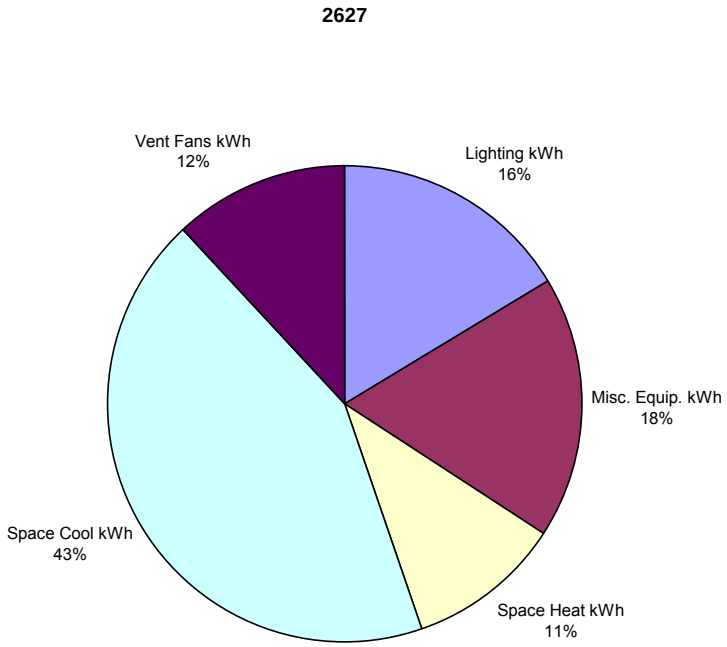


Figure 33. Building 2627 End-Use Energy Consumption Breakdown

Buildings 2701 and 2787

Buildings 2701 and 2787 are adjacent locker room and exercise facilities. The building floor plans are shown in Figure 34 and Figure 35.

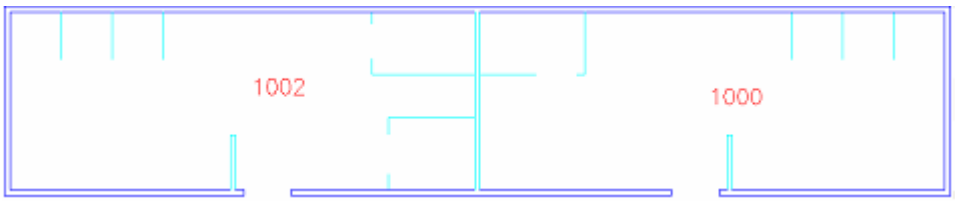


Figure 34. Building 2701 Floor Plan

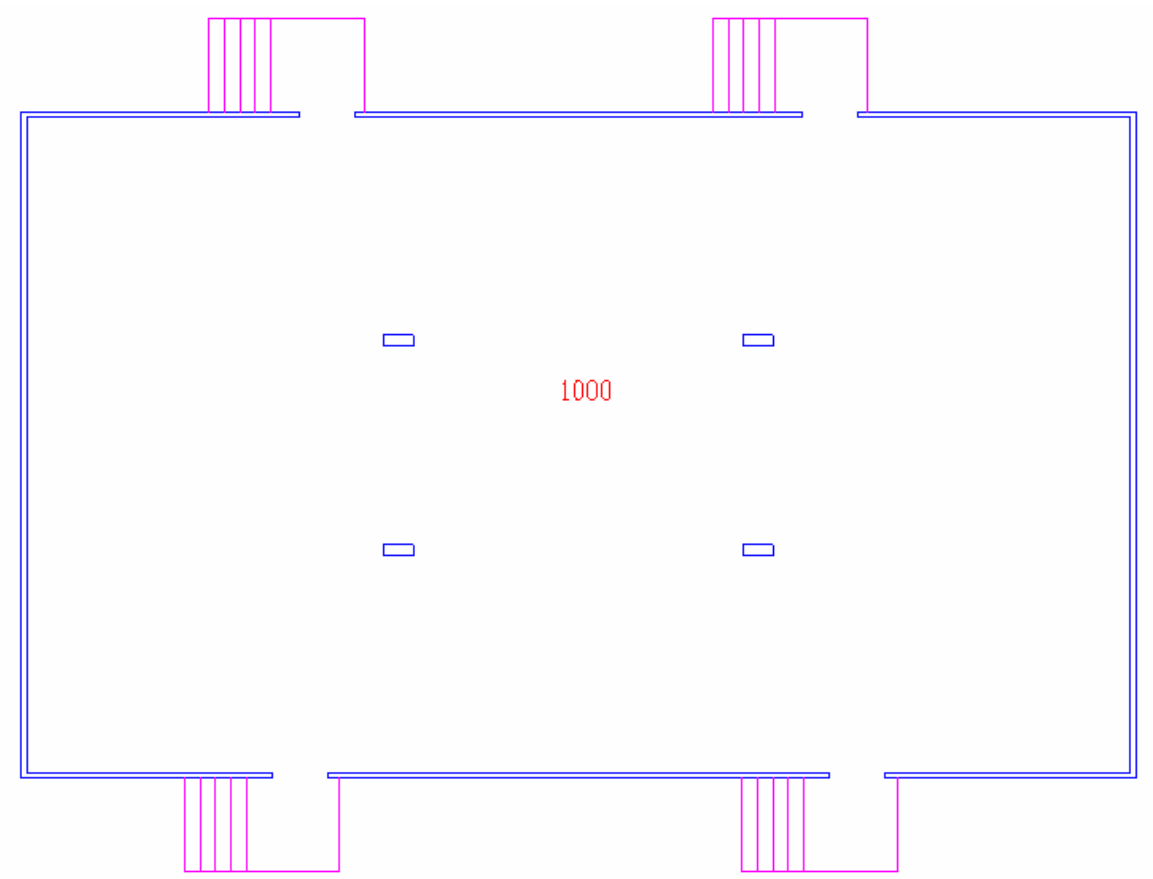


Figure 35. Building 2787 Floor Plan

A summary of the energy-related building characteristics is shown in Table 21.

Table 21. Buildings 2701/2787 Description

Model Parameter	Description
Shape	2701 - Rectangular, 12 feet x 66 feet 2787 - Rectangular, 36 feet x 60 feet
Conditioned floor area	Total of 2,880 sf
Number of floors	1
Floor-to-ceiling height	8 feet
Plenum height	N/A
Exterior wall construction	Wood frame wall
Exterior wall R-Value	R-11 insulation
Window type	Single pane tinted Measured solar trans = 0.342 SC = 0.59, U-value = 1.62
Window/wall ratio	3%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/A
Lighting power density, average	1.21 W/sf
Equipment power density, average	2.274 W/sf
Operating schedule	24 hr/7 day/week
Number of people	2
Outdoor air	15 cfm/person
HVAC system	Single package wall mount heat pumps and AC
Size	4 @ 3 tons
CFM	867 cfm/system
Average Cooling Efficiency	4.9 EER
Economizer	No
Average thermostat setpoints	Heating: 68/68; Cooling: 70/70
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in Table 22.

Table 22. Building 2701/2787 End-Use Energy Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
25,697	27,853	16,741	68,038	18,974	157,303	54.6

The end-use energy consumption breakdown is shown in Figure 36.

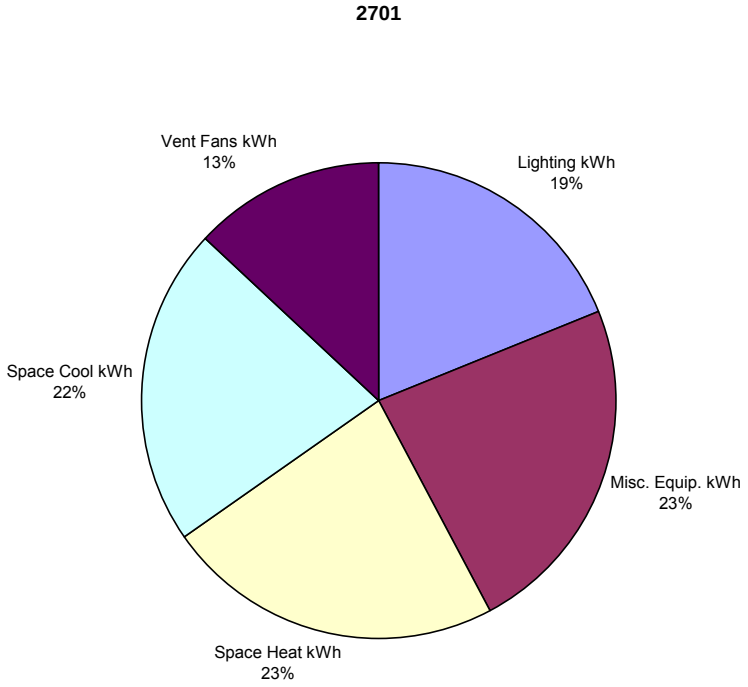


Figure 36. Buildings 2701/2787 End-Use Energy Consumption Breakdown

Building 3725

Building 3725 is a 19,800 square foot modular office building. The building floor plan is shown in Figure 37.

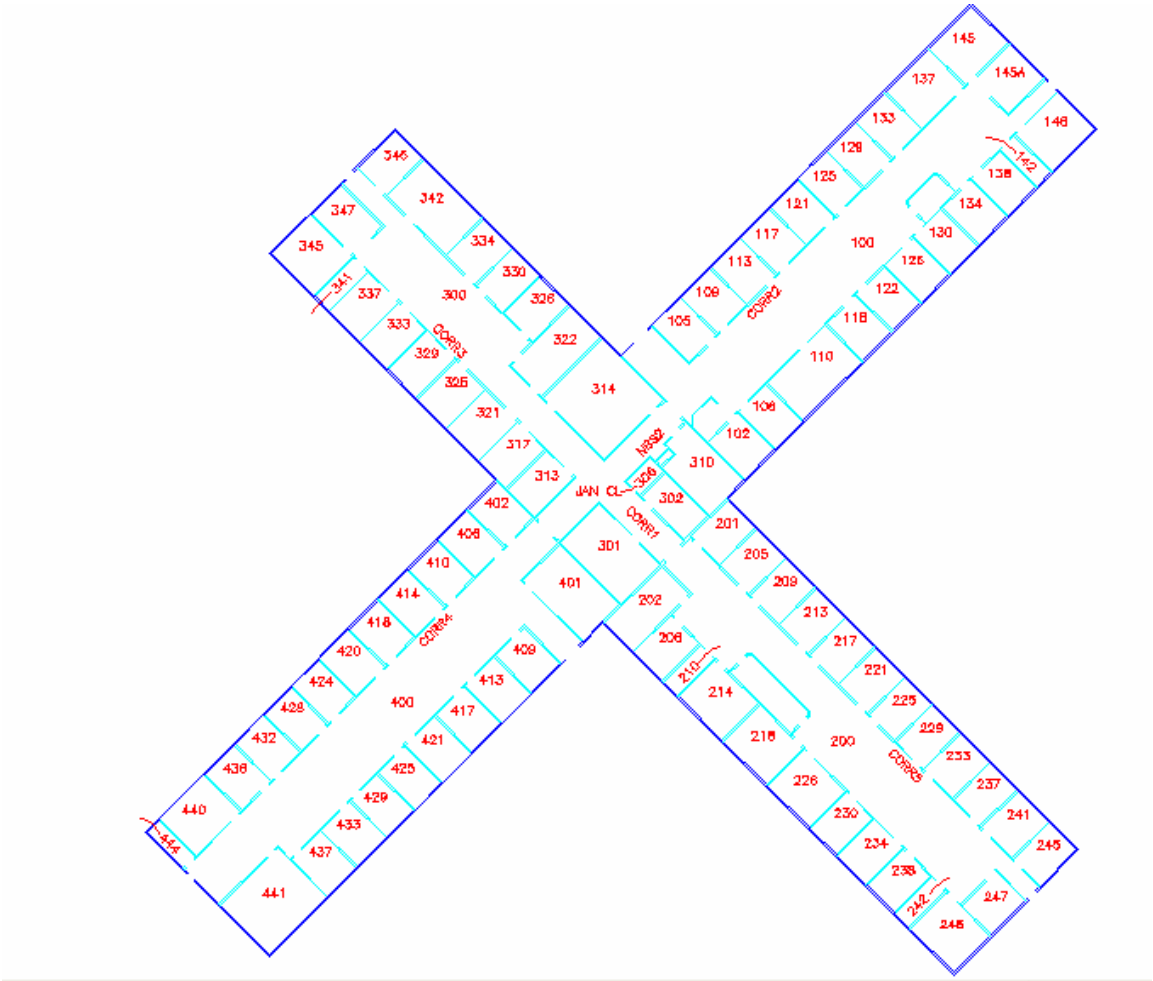


Figure 37. Building 3725 Floor Plan

A summary of the energy-related building characteristics is shown in Table 23.

Table 23. Building 3725 Description

Model Parameter	Description
Shape	Cross, 48 feet x 276 feet and 48 feet x 288 feet
Conditioned floor area	24,192 sf
Number of floors	1
Floor-to-ceiling height	9 feet
Plenum height	1 feet
Exterior wall construction	Wood frame wall

Model Parameter	Description
Exterior wall R-Value	R-11 insulation
Window type	Single pane tinted and reflective Tinted – Measured solar trans = 0.82 SC = 0.57, U-value = 1.62 Reflective - Measured solar trans = 0.21 SC = 0.33, U-value = 1.62
Window/wall ratio	21%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/A
Lighting power density, average	0.95 W/sf
Equipment power density, average	3.7 W/sf
Operating schedule	6:30 am – 6 pm M-F
Number of people	70
Outdoor air	15 cfm/person
HVAC system	Single package rooftop AC
Size	48 @ 2 tons each
CFM	578 cfm/system
Average Measured Efficiency	5.7 EER
Economizer	No
Average thermostat setpoints	Heating: 70/60; Cooling: 73/80
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in Table 24.

Table 24. Building 3725 End-Use Energy Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
71,245	89,114	86,722	83,053	48,969	379,103	15.7

The end-use energy consumption breakdown is shown in Figure 38.

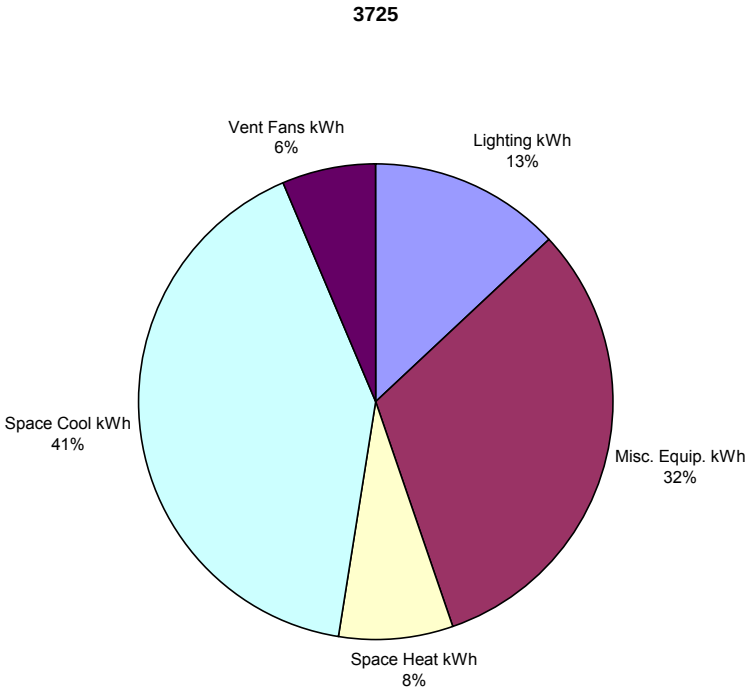


Figure 38. Building 3725 End Use Energy Consumption Breakdown

Model Calibration

Metered electricity data specific to this site was available. Energy consumption predicted by the DOE-2 model was compared to metered data. Model inputs were adjusted to improve the comparison. Note: the models were run with long term average weather data for Sacramento, while the billing data represent the weather in Livermore over a particular period, thus the comparison is not expected to be exact. The calibration exercise is designed to identify any gross errors in the simulation model. The final model results vs. the billing data are shown in Figure 39.

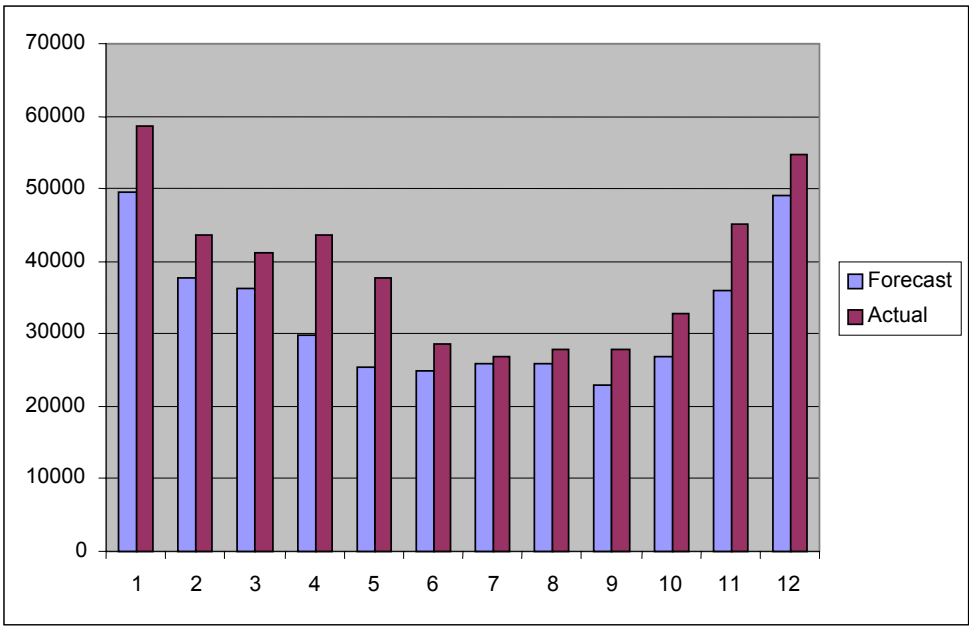


Figure 39. Building 3725 DOE-2 Model Calibration

Building 4128

Building 4128 is an 886 square foot retail building. The overall floor plan is shown in Figure 40.

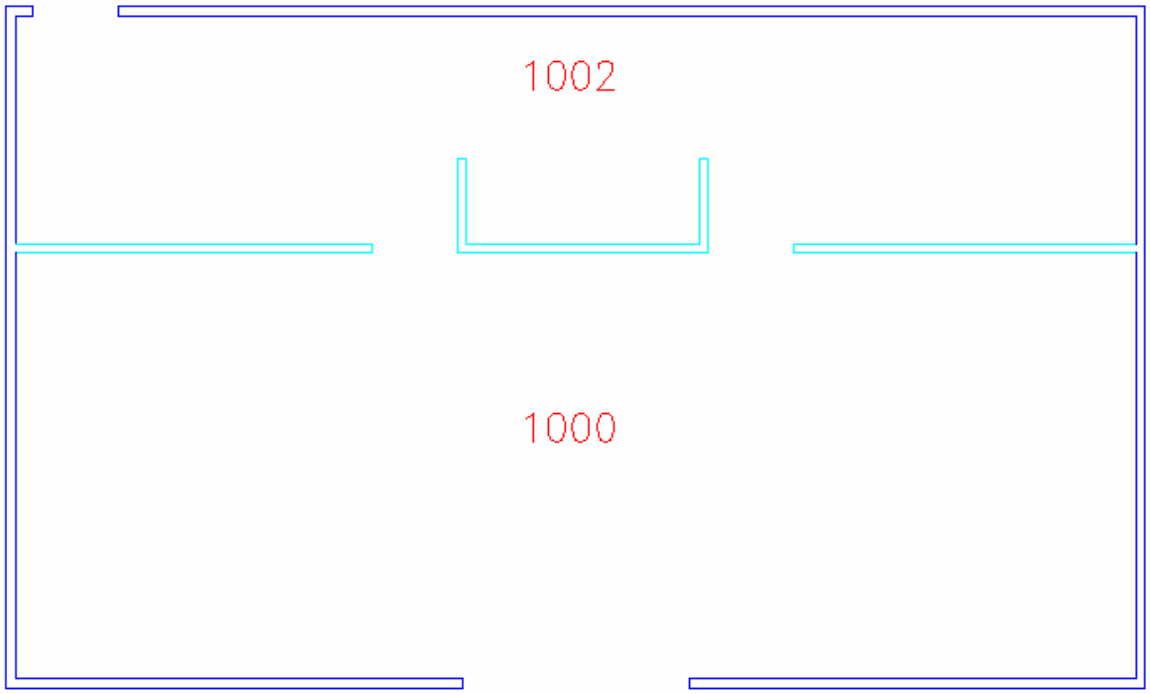


Figure 40. Building 4128 Floor Plan

A summary of the energy-related building characteristics is shown in Table 25.

Table 25. Building 4128 Description

Model Parameter	Description
Shape	Rectangular, 22.5 feet x 38.5 feet
Conditioned floor area	866 sf
Number of floors	1
Floor-to-ceiling height	8 feet
Plenum height	1 feet
Exterior wall construction	Wood frame wall
Exterior wall R-Value	R-11 insulation
Window type	Single pane tinted and reflective Tinted - Measured solar trans = 0.57 SC = 0.85, U-value = 1.62 Reflective - Measured solar trans =

Model Parameter	Description
	0.14 SC = 0.39, U-value = 1.62
Window/wall ratio	6%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/a
Lighting power density, average	1.07 W/sf
Equipment power density. average	3.18 W/sf
Operating schedule	6 am – 4 pm M-F
Number of people	2
Outdoor air	15 cfm/person
HVAC system	Single package wall mount heat pump
Size	1 @ 3 tons
CFM	867 cfm/system
Cooling Efficiency	5.2 EER
Economizer	No
Average thermostat setpoints	Heating: 70/60; Cooling: 72/72
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in Table 26.

Table 26. Building 4128 End-Use Energy Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
2,682	2,659	4,807	8,127	6,069	24,344	28.1

The end-use energy consumption breakdown is shown in Figure 41.

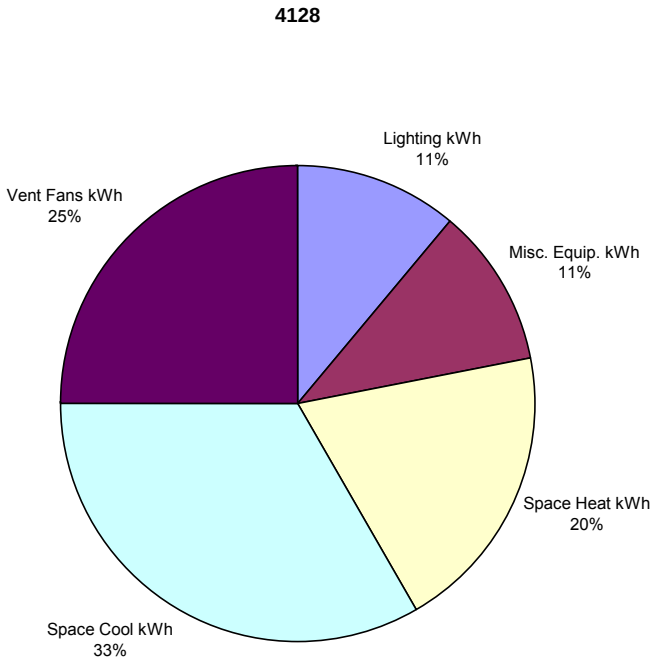


Figure 41. Building 4128 End-Use Energy Consumption Breakdown

Building 4727

Building 4727 is a 9,600 square foot library. The building floor plan is shown in Figure 42.

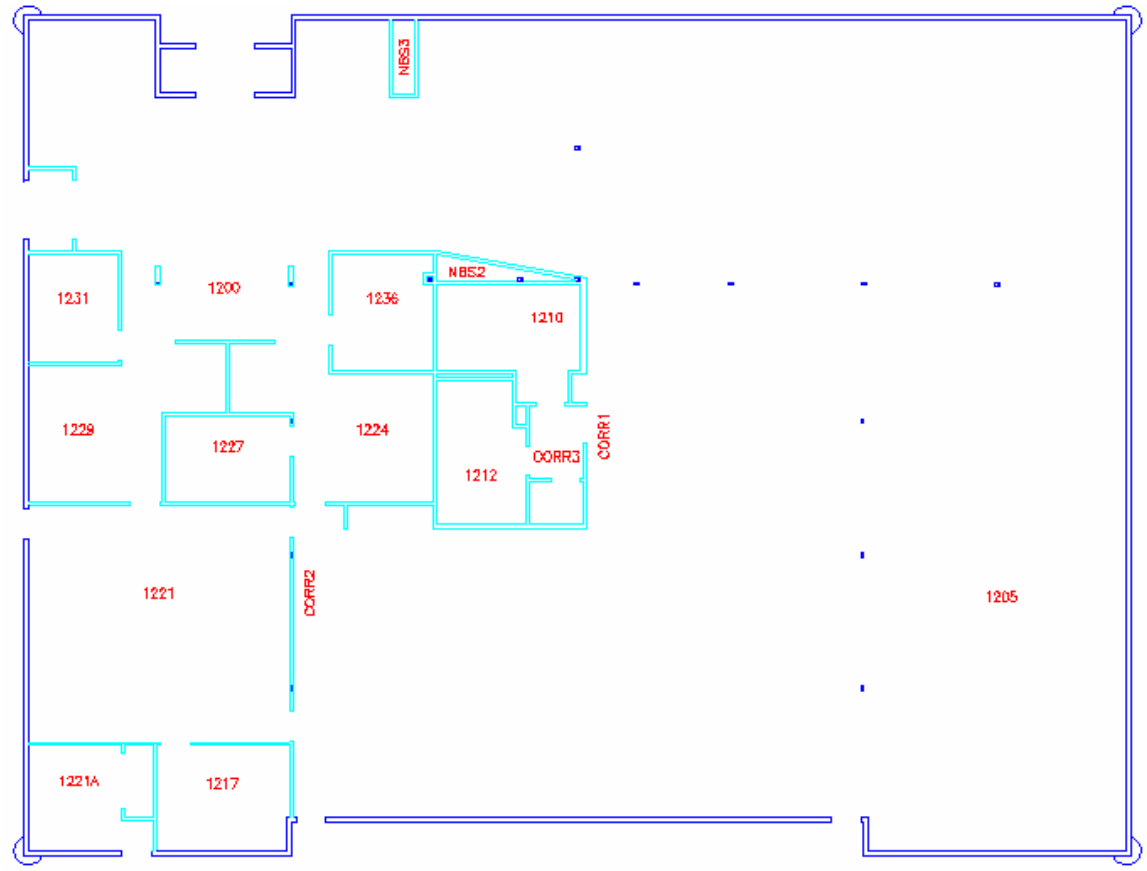


Figure 42. Building 4727 Floor Plan

A summary of the energy-related building characteristics is shown in Table 27.

Table 27. Building 4727 Description

Model Parameter	Description
Shape	Rectangular, 84 feet x 112 feet
Conditioned floor area	9,605 sf
Number of floors	1
Floor-to-ceiling height	8 feet
Plenum height	1 feet
Exterior wall construction	Wood frame wall
Exterior wall R-Value	R-11 insulation
Window type	Single pane reflective and fritted

Model Parameter	Description
	Reflective - Measured solar trans = 0.173
	SC = 0.59, U-value = 1.62
	Fritted - Measured solar trans = 0.121
	SC = 0.49, U-value = 1.62
Window/wall ratio	27%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/A
Lighting power density, average	1.30 W/sf
Equipment power density, average	1.53 W/sf
Operating schedule	24 hr/7 day/week
Number of people	5
Outdoor air	15 cfm/person
HVAC system	Single package water loop heat pump
Size	3 @ 1.5 tons
	3 @ 3 tons
	1 @ 3.5 tons
	2 @ 4 tons
	1 @ 5 tons
CFM	3 @ 600 cfm/system
	3 @ 1200 cfm/system
	1 @ 1400 cfm/system
	2 @ 1600 cfm/system
	1 @ 2000 cfm/system
Cooling Efficiency	12 EER
Economizer	No
Average thermostat setpoints	Heating: 61/61; Cooling: 72/72
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in the Table below:

Table 28. Building 4727 Baseline Energy Use

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
39,295	38,165	24,342	143,653	36,889	282,344	29.4

The end-use energy consumption breakdown is shown in Figure 43.

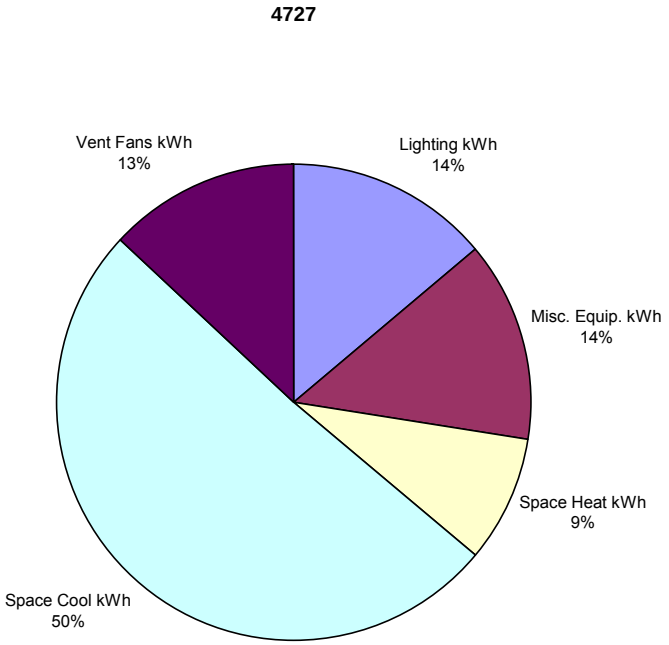


Figure 43. Building 4727 End-Use Energy Consumption

Building 5976

Building 5976 is a 5,600 square foot computing facility. The building floor plan is shown in Figure 44.

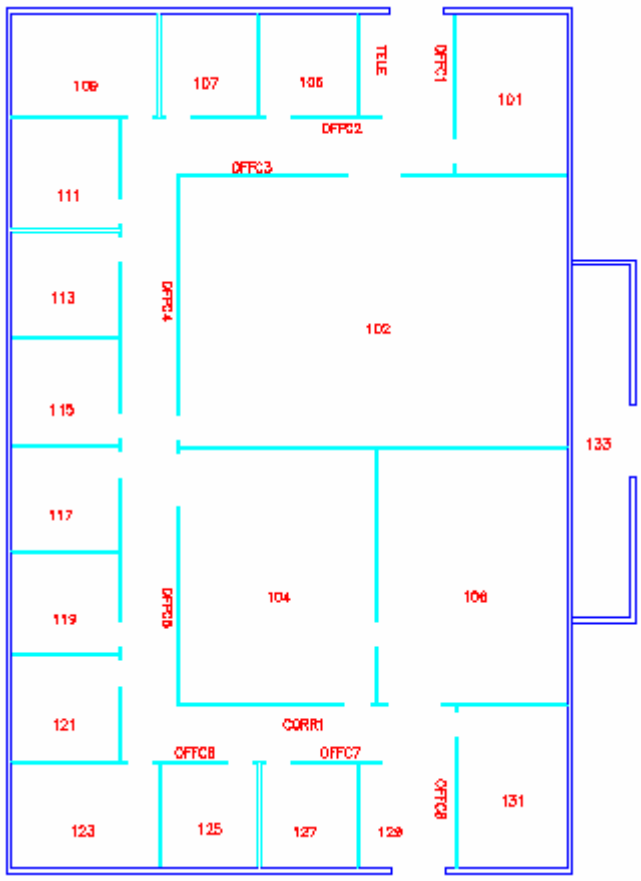


Figure 44. Building 5976 Floor Plan

A summary of the energy-related building characteristics is shown in Table 29.

Table 29. Building 5976 Description

Model Parameter	Standard Building
Shape	Rectangular, 60 feet x 92 feet
Conditioned floor area	5,589 sf
Number of floors	1
Floor-to-ceiling height	8 feet
Plenum height	1 feet
Exterior wall construction	Wood frame wall
Exterior wall R-Value	R-11 insulation

Model Parameter	Standard Building
Window type	Single pane tinted Measured solar trans = 0.545 SC = 0.64, U-value = 1.62
Window/wall ratio	6%
Roof construction	Wood frame roof with R-19 insulation
Roof reflectance	0.2
Ceiling construction	N/A
Lighting power density, average	0.91 W/sf
Equipment power density, average	10.28 W/sf
Operating schedule	7 am – 7 pm M-F
Number of people	1
Outdoor air	15 cfm/person
HVAC system	Single package wall mount with electric heat
Size	1 @ 1.5 tons 2 @ 2 tons 1 @ 3.5 tons 1 @ 5 tons 1 @ 9 tons
CFM	1 of 433 cfm/system 2 of 578 cfm/system 1 of 1011 cfm/system 1 of 1445 cfm/system 1 of 2600 cfm/system
Cooling Efficiency	4.1 EER
Economizer	No
Average thermostat setpoints	Heating: 67/67; Cooling: 72/72
Fan operation	Cycles with call for heat and cooling

Baseline Energy Use

The baseline (as surveyed) energy use for this building is summarized in the Table below:

Table 30. Building 5976 End-Use Energy Consumption

Lighting (kWh)	Misc. Equip. (kWh)	Space Heat (kWh)	Space Cool (kWh)	Vent Fans (kWh)	Total Electricity (kWh)	Energy Use Intensity (kWh/sf)
18,344	216,150	18,595	143,264	66,075	462,428	82.7

The end-use energy consumption breakdown is shown in Figure 45.

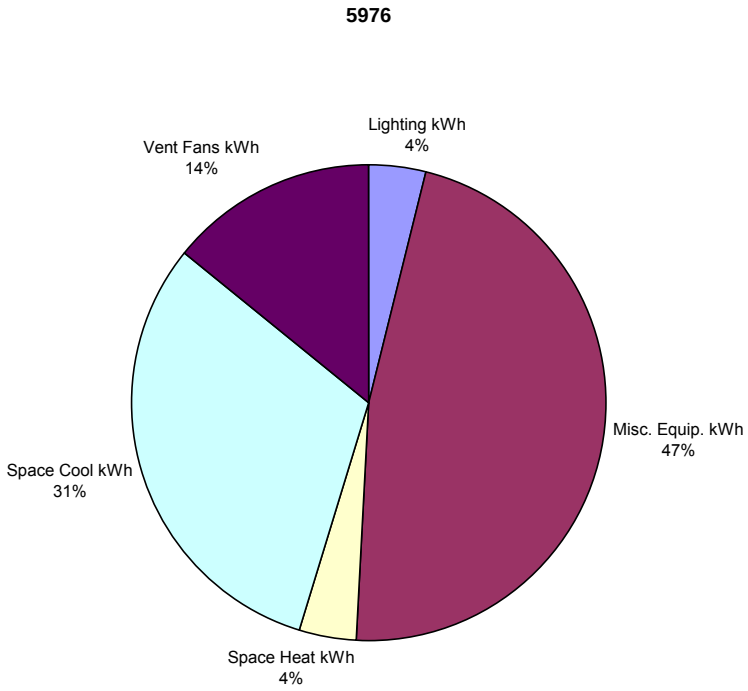


Figure 45. Building 5976 End-Use Energy Consumption Breakdown

Energy Conservation Measure (ECM) Analysis.

The model buildings were used to calculate typical energy savings and costs[3] for each ECM. Level Two audit data were used to modify the model building characteristics to make each model building more representative of the population of buildings at LLNL. For example:

- Glazing characteristics were set according to the observed glazing type and the average measured transmission and SHGC data from the Level 2 audits
- Fan operating modes were set to match the frequency of intermittent and continuous fan operation from the Level 2 audits
- Thermostat setpoints were established from the Level 2 audits. Separate simulations were conducted to estimate the impacts of selected measures on buildings with and without setback thermostats
- Average adjustment factors for EER and air flow from the AC testing were applied to all HVAC units (except the water loop heat pumps in Building 4727, which were not tested).

Based on discussions with the LLNL staff, the order of ECM analysis was established as follows:

1. AC tune ups, with separate runs for each heat source (heat pump and electric resistance) and thermostat type (setback and non-setback)
2. HVAC system scheduling, assuming that the AC systems were tuned up. Separate runs were developed for each heat source (heat pump and electric resistance) and thermostat type (setback and non-setback).
3. All other measures. Each measure is run independently, assuming that the HVAC systems have been tuned and are scheduled. Separate runs were done for each heat source (heat pump and electric resistance).

Energy cost savings were estimated based on a fixed electricity cost of $0.057 per kWh. A discussion of each ECM, the simulated performance and costs are presented below.

Air Conditioner Tune Up

The air conditioning and heat pump performance tests performed during the Level 3 audits identified an important ECM for these buildings. Restoring the air flow rate to the design level and adjusting refrigerant charge based on the superheat (fixed expansion device) or subcooling (thermostatic expansion valve) technique is expected to return the units to their design efficiency. The air flow adjustment work involves opening supply registers, removing duct restrictions, and adjusting motor speed to achieve design flow rate. Once the flow rate is adjusted, the refrigerant charge should be checked using the superheat or subcooling method as applicable. The target unit superheat is a function of the outdoor dry bulb temperature and coil entering wet bulb temperature. Additional measurements of the unit low side pressure and suction line temperature (to measure superheat) or unit high side pressure and liquid line temperature (to measure sub-cooling) are required.

[3] Estimated Measure Costs are developed as "contractor" prices, not including LLNL internal and overhead costs which differ depending on sources of funding used for implementation

Several tools are available to assist in this ECM. The flow grid used to measure flow rates during the Level 3 audits can be used to adjust flow during the tune-up phase. Manufacturers' data, the Carrier "slide rule," or superheat/subcooling charts can be used to determine the correct superheat or subcooling as a function of ambient conditions. Several tools and programs have been developed to assist in the refrigerant charge and air flow correction process, including:

- CheckMe from Proctor Engineering. CheckMe is a field data verification system that uses an "expert system" to assist the service technician and identify measurement errors. The service tech phones into a toll-free number and transfers field data to an engineer, who enters the data into expert system software. The software provides guidance on how to adjust the refrigerant charge, which is relayed to the service tech during the phone call. www.proctoreng.com

- Honeywell Service Assistant. Honeywell is marketing a tool called the service assistant, which consists of a set of refrigerant pressure gages and temperature probes integrated into a Personal Digital Assistant (PDA). The PDA reads the sensors and provides unit diagnostic information to the service tech. www.serviceassistantonline.com

- Verify-RCA. Verify-RCA is an expert system that provides guidance to the service technician on how to adjust charge and air flow. The system can be accessed via a voice-recognition phone-in system, over the internet, or through a PDA. Data collected in the field is archived for later use. A photo of the PDA is shown in Figure 46. www.verify-rca.com

Figure 46. Personal Digital Assistant (PDA) Tool for Adjusting Air Conditioning Charge

Estimated Measure Costs

Costs to perform the tune-up procedure were estimated at about $320 per unit. This estimate includes 3.5 hours of technician time at $63.04 per hour and 1.5 hours of laborer time at $51.67 per hour. Incidental materials for refrigerant and so on are estimated at $20/unit.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system and thermostat type are shown in the Table below:

Table 31. HVAC System Tune-up Energy Savings and Simple Payback

Heat Pump with setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,584	$147	$320	3	$960	6.5
1735	Office trailer	5,031	$287	$320	3	$960	3.3
1886	Storage	2,722	$155	$320	4	$1,280	8.2
2627	Classroom	1,738	$99	$320	4	$1,280	12.9
2701	Gym/locker	4,796	$273	$320	4	$1,280	4.7
3725	Office modular	32,059	$1,827	$320	48	$15,360	8.4
4128	Retail	794	$45	$320	1	$320	7.1
4727	Library						
5976	Computer/telecom	20,214	$1,152	$320	6	$1,920	1.7

Heat Pump without setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	3,165	$180	$320	3	$960	5.3
1735	Office trailer	7,109	$405	$320	3	$960	2.4
1886	Storage	3,452	$197	$320	4	$1,280	6.5
2627	Classroom	2,713	$155	$320	4	$1,280	8.3
2701	Gym/locker	4,796	$273	$320	4	$1,280	4.7
3725	Office modular	41,328	$2,356	$320	48	$15,360	6.5
4128	Retail	1,292	$74	$320	1	$320	4.3
4727	Library	n/a					
5976	Computer/telecom	22,062	$1,258	$320	6	$1,920	1.5

Electric Heat, with setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,475	$141	$320	3	$960	6.8
1735	Office trailer	4,631	$264	$320	3	$960	3.6
1886	Storage	1,990	$113	$320	4	$1,280	11.3
2627	Classroom	1,390	$79	$320	4	$1,280	16.2
2701	Gym/locker	4,063	$232	$320	4	$1,280	5.5
3725	Office modular	22,161	$1,263	$320	48	$15,360	12.2
4128	Retail	726	$41	$320	1	$320	7.7
4727	Library						
5976	Computer/telecom	19,693	$1,123	$320	6	$1,920	1.7

Electric Heat, without setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,973	$169	$320	3	$960	5.7
1735	Office trailer	4,997	$285	$320	3	$960	3.4
1886	Storage	2,472	$141	$320	4	$1,280	9.1
2627	Classroom	1,882	$107	$320	4	$1,280	11.9
2701	Gym/locker	4,063	$232	$320	4	$1,280	5.5
3725	Office modular	28,214	$1,608	$320	48	$15,360	9.6
4128	Retail	1,006	$57	$320	1	$320	5.6
4727	Library						
5976	Computer/telecom	20,762	$1,183	$320	6	$1,920	1.6

HVAC Scheduling

HVAC systems in these buildings are generally controlled by individual zone thermostats. The thermostat setpoints, fan operating mode (continuous fan operation or cycling with a call for heating or cooling) and temperature setback schedule (for units with programmable thermostats) is up to the local occupants. Due to the nature of modular buildings, buildings may have dozens of individual thermostats that are not coordinated. This measure involves scheduling the HVAC equipment temperature setpoints and schedule from a central control system. Centralizing the control of multiple small units can a save significant amount of energy. Also, a central control system can shut down HVAC units if necessary during a "shelter in place" event.

The system design for this measure was developed by the LLNL HVAC design and maintenance department, and consists of individual "Distech" thermostats with Echelon "LON works" compatibility. Each thermostat in a particular building is wired to an iLON server, which communicates to the HVAC department over the LLNL Local Area Network (LAN). Photos of the Distech thermostat and iLON server are shown in Figure 47. Note: No energy savings were calculated for the Library (Building 4727) and the Gym/Locker room (Building 2701), since these are 24 hour facilities.

Figure 47. LON-based Thermostat and iLON Server Hardware

Estimated Measure Costs

Measure costs were estimated with the cooperation of the LLNL HVAC department, as shown below:

Material costs:

Distech thermostat: $375 each; one required for each HVAC unit
iLON server: $500 each; one required for each building
Total material costs: $442 per HVAC unit controlled (assumes 3 units per building)

Labor costs: $442 per HVAC unit controlled

Total costs: $840 per HVAC unit controlled.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system and thermostat type are shown in the Table below:

Table 32. HVAC System Scheduling Energy Savings and Simple Payback

Heating System: Heat Pump without setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	5,944	$339	$840	3	$2,520	7.4
1735	Office trailer	14,498	$826	$840	3	$2,520	3.0
1886	Storage	9,148	$521	$840	4	$3,360	6.4
2627	Classroom	7,028	$401	$840	4	$3,360	8.4
2701	Gym/locker	n/a					
3725	Office modular	70,626	$4,026	$840	48	$40,320	10.0
4128	Retail	1,569	$89	$840	1	$840	9.4

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
4727	Library	n/a					
5976	Computer/telecom	11,614	$662	$840	6	$5,040	7.6

Heating System: Heat Pump with setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,689	$153	$840	3	$2,520	16.4
1735	Office trailer	6,483	$370	$840	3	$2,520	6.8
1886	Storage	5,023	$286	$840	4	$3,360	11.7
2627	Classroom	3,550	$202	$840	4	$3,360	16.6
2701	Gym/locker	n/a					
3725	Office modular	42,772	$2,438	$840	48	$40,320	16.5
4128	Retail	387	$22	$840	1	$840	38.1
4727	Library	n/a					
5976	Computer/telecom	6,308	$360	$840	6	$5,040	14.0

Heating System: Electric resistance without setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	4,817	$275	$840	3	$2,520	9.2
1735	Office trailer	16,690	$951	$840	3	$2,520	2.6
1886	Storage	9,602	$547	$840	4	$3,360	6.1
2627	Classroom	8,676	$495	$840	4	$3,360	6.8
2701	Gym/locker	n/a					
3725	Office modular	89,613	$5,108	$840	48	$40,320	7.9
4128	Retail	2,146	$122	$840	1	$840	6.9
5976	Computer/telecom	12,112	$690	$840	6	$5,040	7.3

Heating System: Electric resistance with setback thermostat

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,216	$126	$840	3	$2,520	20.0
1735	Office trailer	7,103	$405	$840	3	$2,520	6.2
1886	Storage	5,052	$288	$840	4	$3,360	11.7
2627	Classroom	4,023	$229	$840	4	$3,360	14.7
2701	Gym/locker	n/a					
3725	Office modular	51,689	$2,946	$840	48	$40,320	13.7
4128	Retail	307	$17	$840	1	$840	48.0
5976	Computer/telecom	6,099	$348	$840	6	$5,040	14.5

Cool Roof

Cool roofs are roofing materials that reflect solar heat gain, reducing the roof temperature and heat transmitted through the insulated roof into the building. Most common roofing materials have "cool" options, as shown in the Table below. Materials that have a reflectance and a thermal emittance greater than 70% are shaded.

Table 33. Cool Roof Materials and Properties

Cool Roof Type	Material	Total Solar Reflectance	Emittance
Reflective coatings	Kool seal elastomeric over asphalt shingle	0.71	0.91
	Aged elastomeric on plywood	0.73	0.86
	Flex-tec elastomeric on shingle	0.65	0.89
	Insultec on metal swatch	0.78	0.90
	Enerchon on metal swatch	0.77	0.91
	Aluminum pigmented roof coating	0.30 – 0.55	0.42 – 0.67
	Lo-mit on asphalt shingle	0.54	0.42
White metal roofing	MBCI Siliconized white	0.59	0.85
	Atlanta Metal products Kynar Snow White	0.67	0.85
Single-ply roof membrane	Black EPDM	0.06	0.86
	Grey EPDM	0.23	0.87
	White EPDM	0.69	0.87
	White T-EPDM	0.81	0.92
	Hypalon	0.76	0.91
Paint	White	0.85	0.96
	Aluminum paint	0.80	0.40
Asphalt shingles	Black	0.03 – 0.05	0.91
	Dark brown	0.08 – 0.10	0.91
	Medium brown	0.12	0.91
	Light brown	0.19 – 0.20	0.91
	Green	0.16 – 0.19	0.91
	Grey	0.08 – 0.12	0.91
	Light grey	0.18 – 0.22	0.91
	White	0.21 – 0.31	0.91

Reflective coatings can be applied to existing roofs, or cool materials can be used during re-roofing. For this analysis, buildings that need to be re-roofed are considered candidates for "cool" roofs.

Estimated Measure Costs

Incremental costs for cool roof materials were estimated by Lawrence Berkeley Laboratory for the Pacific Gas and Electric Company (PG&E, 2002). These data are summarized in the Table below.

Table 34. Cool Roof Cost Estimates

Roofing Product	Cool Variety	Cost Premium ($/sf)
Ballasted BUR	use white gravel	up to 0.05
BUR with smooth asphalt coating	use cementitious or other white coatings	0.10 to 0.20
BUR with aluminum coating	use cementitious or other white coatings	0.10 to 0.20
Single-ply membrane (EPDM, TPO, CSPE, PVC)	choose a white color	0.00 to 0.05
Modified bitumen (SBS, APP)	use a white coating over the mineral surface	up to 0.05
metal roofing (both painted and unpainted)	use a white or cool color paint	0.00 to 0.05
Roof coatings (dark color, asphalt base)	use a white or cool color coating	0.00 to 0.10
Concrete tile	use a white or cool color	0.00 to 0.05
Cement tile (unpainted)	use a white or cool color	0.05
Red clay tile	use cool red tiles	0.10

An incremental cost of $0.10 per square foot was used in this analysis.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 35. Cool Roof Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	1,248	$71	$0.10	2,088	$209	2.9
1735	Office trailer	1,326	$76	$0.10	3,316	$332	4.4
1886	Storage	817	$47	$0.10	3,024	$302	6.5
2627	Classroom	1,090	$62	$0.10	1,824	$182	2.9
2701	Gym/locker	1,449	$83	$0.10	2,880	$288	3.5
3725	Office modular	6,146	$350	$0.10	24,192	$2,419	6.9
4128	Retail	268	$15	$0.10	866	$87	5.7
4727	Library	2,178	$124	$0.10	9,605	$961	7.7
5976	Computer/telecom	2,391	$136	$0.10	5,589	$559	4.1

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	1,256	$72	$0.10	2,088	$209	2.9
1735	Office trailer	1,167	$67	$0.10	3,316	$332	5.0
1886	Storage	619	$35	$0.10	3,024	$302	8.6
2627	Classroom	998	$57	$0.10	1,824	$182	3.2
2701	Gym/locker	1,356	$77	$0.10	2,880	$288	3.7
3725	Office modular	4,057	$231	$0.10	24,192	$2,419	10.5
4128	Retail	218	$12	$0.10	866	$87	7.0
5976	Computer/telecom	2,307	$131	$0.10	5,589	$559	4.3

Window Shading

Solar shade screens were evaluated to reduce heat gains and to help equalize the loads between rooms with different solar exposures. Shade screens can be very effective at blocking solar heat gain, while preserving views to the outdoors. According to the ASHRAE Handbook of Fundamentals (ASHRAE, 2001), exterior shade screens block approximately 80% of the incoming solar heat gain.

Estimated Measure Costs

Shade screen costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, exterior sunscreen costs are as follows:

Material cost: $0.98 per SF
Labor cost: $2.56 per SF
Total cost: $3.55 per SF

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type and window orientation are shown in the Table below:

Table 36. Window Shading Energy Savings and Simple Payback

Heating System: Heat Pump
North windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	427	$24	$3.55	53.6	$190	7.8
1735	Office trailer	82	$5	$3.55	155	$550	117.7
1886	Storage	436	$25	$3.55	129	$458	18.4
2627	Classroom	83	$5	$3.55	14	$50	10.5
2701	Gym/locker	108	$6	$3.55	19	$67	11.0

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
3725	Office modular	2,293	$131	$3.55	405	$1,438	11.0
4128	Retail	80	$5	$3.55	22	$78	17.1
4727	Library	769	$44	$3.55	466	$1,654	37.7
5976	Computer/telecom	356	$20	$3.55	41	$146	7.2

East windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	652	$37	$3.55	36	$128	3.4
1735	Office trailer	405	$23	$3.55	211	$749	32.4
1886	Storage	603	$34	$3.55	80	$284	8.3
2627	Classroom	636	$36	$3.55	54	$192	5.3
2701	Gym/locker	n/a					
3725	Office modular	3,431	$196	$3.55	630	$2,237	11.4
4128	Retail	88	$5	$3.55	11	$39	7.8
4727	Library	610	$35	$3.55	232	$824	23.7
5976	Computer/telecom	42	$2	$3.55	58	$206	86.0

South windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	998	$57	$3.55	60	$213	3.7
1735	Office trailer	551	$31	$3.55	183	$650	20.7
1886	Storage	444	$25	$3.55	123	$437	17.3
2627	Classroom	n/a					
2701	Gym/locker	363	$21	$3.55	56	$199	9.6
3725	Office modular	3,667	$209	$3.55	315	$1,118	5.3
4128	Retail	36	$2	$3.55	22	$78	38.1
4727	Library	602	$34	$3.55	268	$951	27.7
5976	Computer/telecom	775	$44	$3.55	45	$160	3.6

West windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	n/a					
1735	Office trailer	185	$11	$3.55	61	$217	20.5
1886	Storage	695	$40	$3.55	90	$320	8.1
2627	Classroom	294	$17	$3.55	42	$149	8.9
2701	Gym/locker	n/a					
3725	Office modular	1,657	$94	$3.55	660	$2,343	24.8
4128	Retail	n/a					
4727	Library	288	$16	$3.55	156	$554	33.7
5976	Computer/telecom	525	$30	$3.55	6	$21	0.7

Heating System: Electric Resistance

North windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	431	$25	$3.55	53.6	$190	7.7
1735	Office trailer	54	$3	$3.55	155	$550	178.8
1886	Storage	308	$18	$3.55	129	$458	26.1
2627	Classroom	78	$4	$3.55	14	$50	11.2
2701	Gym/locker	103	$6	$3.55	19	$67	11.5
3725	Office modular	1,702	$97	$3.55	405	$1,438	14.8
4128	Retail	66	$4	$3.55	22	$78	20.8
5976	Computer/telecom	341	$19	$3.55	41	$146	7.5

East windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	655	$37	$3.55	36	$128	3.4
1735	Office trailer	314	$18	$3.55	211	$749	41.9
1886	Storage	459	$26	$3.55	80	$284	10.9
2627	Classroom	567	$32	$3.55	54	$192	5.9
2701	Gym/locker	n/a					
3725	Office modular	2,421	$138	$3.55	630	$2,237	16.2
4128	Retail	45	$3	$3.55	11	$39	15.2
5976	Computer/telecom	39	$2	$3.55	58	$206	92.6

South windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	1,020	$58	$3.55	60	$213	3.7
1735	Office trailer	496	$28	$3.55	183	$650	23.0
1886	Storage	-208	-$12	$3.55	123	$437	never
2627	Classroom	n/a					
2701	Gym/locker	21	$1	$3.55	56	$199	166.1
3725	Office modular	959	$55	$3.55	315	$1,118	20.5
4128	Retail	23	$1	$3.55	22	$78	59.6
5976	Computer/telecom	731	$42	$3.55	45	$160	3.8

West windows

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	n/a					
1735	Office trailer	162	$9	$3.55	61	$217	23.5
1886	Storage	504	$29	$3.55	90	$320	11.1
2627	Classroom	267	$15	$3.55	42	$149	9.8

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
2701	Gym/locker	n/a					
3725	Office modular	522	$30	$3.55	660	$2,343	78.7
4128	Retail	n/a					
5976	Computer/telecom	482	$27	$3.55	6	$21	0.8

High Efficiency Air Conditioning Upgrade

This measure evaluates upgrading the current LLNL HVAC equipment specification to require high efficiency heat pumps with air side economizers during all equipment replacements. The measure analysis assumes a 10 SEER unit without economizer as the baseline, upgraded a 13 SEER unit with economizer. Units with electric resistance heat would be upgraded to heat pumps.

Estimated Measure Costs

High efficiency HVAC upgrade costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the upgrade costs are as follows:

Material cost: $92.00 per ton
Labor cost: no incremental labor costs
Total cost: $92.00 per ton

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 37. High Efficiency HVAC Upgrade Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	4,044	$231	$92.00	9.0	$828	3.6
1735	Office trailer	3,008	$171	$92.00	11.0	$1,012	5.9
1886	Storage	2,693	$154	$92.00	11.3	$1,040	6.8
2627	Classroom	4,206	$240	$92.00	8.0	$736	3.1
2701	Gym/locker	12,984	$740	$92.00	12.0	$1,104	1.5
3725	Office modular	22,624	$1,290	$92.00	96.0	$8,832	6.8
4128	Retail	1,503	$86	$92.00	3.0	$276	3.2
4727	Library	12,305	$701	$92.00	30.0	$2,760	3.9
5976	Computer/telecom	40,633	$2,316	$92.00	23.0	$2,116	0.9

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	4,034	$230	$92.00	9.0	$828	3.6
1735	Office trailer	4,134	$236	$92.00	11.0	$1,012	4.3
1886	Storage	4,369	$249	$92.00	11.3	$1,040	4.2
2627	Classroom	4,554	$260	$92.00	8.0	$736	2.8
2701	Gym/locker	14,456	$824	$92.00	12.0	$1,104	1.3
3725	Office modular	34,765	$1,982	$92.00	96.0	$8,832	4.5
4128	Retail	1,743	$99	$92.00	3.0	$276	2.8
5976	Computer/telecom	40,860	$2,329	$92.00	23.0	$2,116	0.9

Economizer with Demand-Controlled Ventilation

This measure involves retrofitting existing HVAC units with air side economizers and demand controlled ventilation (DCV) systems: The air side economizer uses outdoor air for cooling whenever the outdoor conditions are favorable. The DCV system uses CO_2 Sensors to sense indoor air quality. CO_2 levels are typically indicative of space occupancy, and can subsequently be used to determine the amount of fresh air required for a given space at any given time. Demand-controlled ventilation controls vary the ventilation rate to limit CO_2 levels and subsequent levels of airborne contaminants. This measure can save energy in facilities that normally operate with light occupancy, but are designed for heavy occupancies.

Economizer and DCV upgrade kits are generally not available for older wall-mounted HVAC units. Packaged rooftop units can be upgraded with economizers and DCV control by specifying an economizer controller with DCV capability. Photos of typical CO_2 sensors are in Figure 48.

Wall mounted CO_2 sensor used in demand-controlled ventilation systems

Duct mounted CO_2 sensor used in demand-controlled ventilation systems

Figure 48. CO_2 Sensors Used with Demand-Controlled Ventilation Systems

Estimated Measure Costs

Incremental costs for adding DCV capability to an HVAC unit were estimated for the California Energy Commission (Eley Associates), and are summarized below. These costs include the incremental costs for the DCV-enabled economizer controller and CO_2 sensor. Additional costs for basic economizer package are not included.

Material: $375
Labor: Two hours @ $63.04 per hour (AC technician rate)
Total costs: $501/unit

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 38. Economizer and Demand Controlled Ventilation Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,042	$116	$501.00	3	$1,503	12.9
1735	Office trailer	280	$16	$501.00	3	$1,503	94.2
1886	Storage	549	$31	$501.00	4	$2,004	64.0
2627	Classroom	2,111	$120	$501.00	4	$2,004	16.7
2701	Gym/locker	9,452	$539	$501.00	4	$2,004	3.7
3725	Office modular	3,160	$180	$501.00	48	$24,048	133.5
4128	Retail	645	$37	$501.00	1	$501	13.6
4727	Library	0	$0	$501.00	10	$5,010	
5976	Computer/telecom	8,905	$508	$501.00	6	$3,006	5.9

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,056	$117	$501.00	3	$1,503	12.8
1735	Office trailer	285	$16	$501.00	3	$1,503	92.5
1886	Storage	541	$31	$501.00	4	$2,004	65.0
2627	Classroom	2,112	$120	$501.00	4	$2,004	16.6
2701	Gym/locker	9,452	$539	$501.00	4	$2,004	3.7
3725	Office modular	3,058	$174	$501.00	48	$24,048	138.0
4128	Retail	707	$40	$501.00	1	$501	12.4
5976	Computer/telecom	8,905	$508	$501.00	6	$3,006	5.9

Evaporative Cooling Unit

Evaporative cooling systems are much more efficient that vapor compression systems and can be quite effective in hot/dry climates. Indirect/direct evaporative cooling units designed for wall mount applications are currently under development in a California Energy Commission Public Interest Energy Research (PIER) project. A photo of the prototype unit is shown in Figure 49.

Figure 49. Indirect/Direct Evaporative Cooling Systems for Wall-Mounted Applications

Indirect/direct evaporative cooling systems with high efficiency media provide cooling at high efficiency without excessive moisture in the space. Indoor air quality is improved, since units function with 100% outdoor air during cooling mode. Since there is no compressor in the unit, heating must be provided with electric resistance elements.

The unit pictured above is a prototype. No indirect/direct evaporative systems suitable for wall-mounted applications are currently available. However, as an equipment replacement option, these units could be considered in the future.

Estimated Measure Costs

Final costs for this measure are not known, since the product is currently under development. Short-run prototype costs are about $2500 per unit, or about $715/ton for a 3.5 ton equivalent cooling output unit. According to the DEER database, this represents a $425/per ton premium over a standard DX HVAC unit. These costs will likely come down as the units become commercially available in production quantities.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 39. Indirect/Direct Evaporative Cooling System Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	12,040	$686	$425.00	9.0	$3,825	5.6
1735	Office trailer	7,157	$408	$425.00	11.0	$4,675	11.5
1886	Storage	4,943	$282	$425.00	11.3	$4,803	17.0
2627	Classroom	8,246	$470	$425.00	8.0	$3,400	7.2
2701	Gym/locker	23,369	$1,332	$425.00	12.0	$5,100	3.8
3725	Office modular	33,284	$1,897	$425.00	96.0	$40,800	21.5
4128	Retail	1,862	$106	$425.00	3.0	$1,275	12.0
5976	Computer/telecom	73,506	$4,190	$425.00	23.0	$9,775	2.3

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	11,947	$681	$425.00	9.0	$3,825	5.6
1735	Office trailer	8,093	$461	$425.00	11.0	$4,675	10.1
1886	Storage	6,498	$370	$425.00	11.3	$4,803	13.0
2627	Classroom	8,617	$491	$425.00	8.0	$3,400	6.9
2701	Gym/locker	25,131	$1,432	$425.00	12.0	$5,100	3.6
3725	Office modular	47,835	$2,727	$425.00	96.0	$40,800	15.0
4128	Retail	2,195	$125	$425.00	3.0	$1,275	10.2
5976	Computer/telecom	73,691	$4,200	$425.00	23.0	$9,775	2.3

Daylighting Controls

This measure analysis evaluates the use of light level sensors and dimmable electronic ballasts to dim overhead lighting in response to natural daylight from existing windows in perimeter spaces. Building floor plans were examined to identify private perimeter spaces that could benefit from daylighting controls. These spaces are mostly private offices, thus limiting the number of fixtures controlled by each daylighting sensor.

Estimated Measure Costs

Daylighting control costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the costs for installing daylighting controls in a private office are as follows:

Material costs: $230 per controller
Labor costs: $373 per controller
Total costs: $604 per controller

The prices include a dimming electronic ballast and associated daylighting sensors.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 40. Daylighting Controls Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	6,022	$343	$604.00	8	$4,832	14.1
1735	Office trailer	5,100	$291	$604.00	15	$9,060	31.2
1886	Storage	6,595	$376	$604.00	8	$4,832	12.9
2627	Classroom	2,939	$168	$604.00	3	$1,812	10.8
2701	Gym/locker	10,398	$593	$604.00	2	$1,208	2.0
3725	Office modular	25,240	$1,439	$604.00	66	$39,864	27.7
4128	Retail	2,343	$134	$604.00	1	$604	4.5
4727	Library	8,002	$456	$604.00	10	$6,040	13.2
5976	Computer/telecom	7,713	$440	$604.00	14	$8,456	19.2

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	6,046	$345	$604.00	8	$4,832	14.0
1735	Office trailer	4,924	$281	$604.00	15	$9,060	32.3
1886	Storage	6,069	$346	$604.00	8	$4,832	14.0
2627	Classroom	2,874	$164	$604.00	3	$1,812	11.1
2701	Gym/locker	9,760	$556	$604.00	2	$1,208	2.2
3725	Office modular	23,436	$1,336	$604.00	66	$39,864	29.8
4128	Retail	2,243	$128	$604.00	1	$604	4.7
5976	Computer/telecom	7,655	$436	$604.00	14	$8,456	19.4

Radiant Barrier

Installation of reflective or low-e materials in ceiling plenum to reduce radiant heat transfer from the underside of the roof deck to the ceiling tiles was evaluated here. Radiant heat transfer was not considered to be a major issue in other opaque surface applications. The internal film coefficient on the underside of the roof deck was changed from R-0.92 to R-2.7 to account for a low emissivity surface at that location. A photo of a spray-on application of a low-e coating (SOLEC Low/Mit) in new construction is shown in the Figure below:

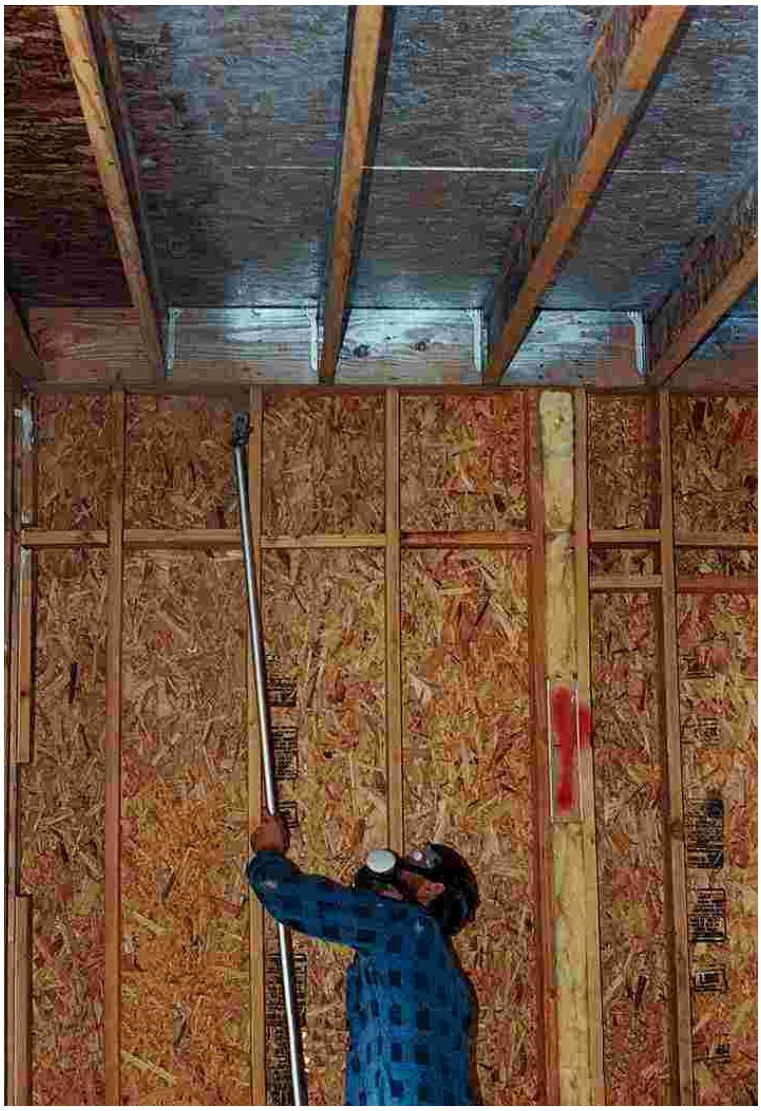


Figure 50. Spray-on Radiant Barrier Application

The thermal performance of this measure considering that the roof deck in these buildings is insulated was not very good. This fact, coupled with the installation problems associated with implementing this measure on a retrofit basis precluded developing any cost information.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 41. Radiant Barrier Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	74	$4	$0.10	2,088	$209	49.5
1735	Office trailer	122	$7	$0.10	3,316	$332	47.7
1886	Storage	132	$8	$0.10	3,024	$302	40.2
2627	Classroom	77	$4	$0.10	1,824	$182	41.6
2701	Gym/locker	122	$7	$0.10	2,880	$288	41.4
3725	Office modular	822	$47	$0.10	24,192	$2,419	51.6
4128	Retail	30	$2	$0.10	866	$87	50.6
4727	Library	310	$18	$0.10	9,605	$961	54.4
5976	Computer/telecom	75	$4	$0.10	5,589	$559	130.7

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	61	$3	$0.10	2,088	$209	60.1
1735	Office trailer	146	$8	$0.10	3,316	$332	39.8
1886	Storage	184	$10	$0.10	3,024	$302	28.8
2627	Classroom	109	$6	$0.10	1,824	$182	29.4
2701	Gym/locker	181	$10	$0.10	2,880	$288	27.9
3725	Office modular	1,305	$74	$0.10	24,192	$2,419	32.5
4128	Retail	45	$3	$0.10	866	$87	33.8
5976	Computer/telecom	90	$5	$0.10	5,589	$559	108.9

Roof Insulation

Analysis of this measure considered adding additional roof insulation during roof replacement. The baseline roof R-value as assumed to be R-11 or R-19 batts (according to the onsite survey) attached to the underside of the roof deck. Add ional R-10 insulation added to the top of the roof deck during roof replacement brought the total insulation R-value up to R-21 or R-29.

Estimated Measure Costs

Additional roof insulation costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the costs for installing R-10 rigid insulation is $0.56 per square foot

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 42. Roof Insulation Upgrade Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	138	$8	$0.56	2,088	$1,169	148.6
1735	Office trailer	278	$16	$0.56	3,316	$1,857	117.2
1886	Storage	331	$19	$0.56	3,024	$1,693	89.8
2627	Classroom	165	$9	$0.56	1,824	$1,021	108.6
2701	Gym/locker	304	$17	$0.56	2,880	$1,613	93.1
3725	Office modular	2,280	$130	$0.56	24,192	$13,548	104.2
4128	Retail	64	$4	$0.56	866	$485	132.9
4727	Library	874	$50	$0.56	9,605	$5,379	108.0
5976	Computer/telecom	122	$7	$0.56	5,589	$3,130	450.1

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	119	$7	$0.56	2,088	$1,169	172.4
1735	Office trailer	396	$23	$0.56	3,316	$1,857	82.3
1886	Storage	524	$30	$0.56	3,024	$1,693	56.7
2627	Classroom	265	$15	$0.56	1,824	$1,021	67.6
2701	Gym/locker	485	$28	$0.56	2,880	$1,613	58.3
3725	Office modular	3,965	$226	$0.56	24,192	$13,548	59.9
4128	Retail	112	$6	$0.56	866	$485	76.0
5976	Computer/telecom	189	$11	$0.56	5,589	$3,130	290.5

Skylighting

Skylights were added to the model in all non-perimeter spaces to evaluate the energy savings from introducing daylighting into interior spaces. Double-pane, non imaging plastic skylights totaling 5% of the associated floor area were simulated along with dimming electronic daylighting controls.

Estimated Measure Costs

Skylight and daylighting control costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the costs for installing a skylight in and existing building is $28 per square foot of skylight. An allowance for constructing light wells and installing daylighting controls brings the total estimated cost to $67.62 per skylight square foot.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 43. Skylighting Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	1,764	$101	$67.62	36	$2,455	24.4
1735	Office trailer	731	$42	$67.62	52	$3,496	83.9
1886	Storage	905	$52	$67.62	52	$3,503	67.9
2627	Classroom	804	$46	$67.62	32	$2,147	46.8
2701	Gym/locker	6,180	$352	$67.62	61	$4,116	11.7
3725	Office modular	23,507	$1,340	$67.62	408	$27,589	20.6
4128	Retail	646	$37	$67.62	22	$1,457	39.6
4727	Library	7,800	$445	$67.62	279	$18,844	42.4
5976	Computer/telecom	5,904	$337	$67.62	120	$8,086	24.0

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	1,777	$101	$67.62	36	$2,455	24.2
1735	Office trailer	643	$37	$67.62	52	$3,496	95.4
1886	Storage	640	$36	$67.62	52	$3,503	96.0
2627	Classroom	742	$42	$67.62	32	$2,147	50.8
2701	Gym/locker	5,980	$341	$67.62	61	$4,116	12.1
3725	Office modular	21,323	$1,215	$67.62	408	$27,589	22.7
4128	Retail	566	$32	$67.62	22	$1,457	45.1
5976	Computer/telecom	5,827	$332	$67.62	120	$8,086	24.3

Super T-8s

Low power (30W) versions of T-8 lamps are now available. This super T-8 product includes the following enhancements over first generation standard T-8 lamps:

- Premium construction of cathode assembly designed for extended lamp life.
- Use of "barrier coat" phosphor, which returns unused UV radiation into the lamp and reduces lamp lumen depreciation.
- Use of optimized high CRI phosphor.

The result of these enhancements is a lamp that generates more light and more maintained lumens per watt than common T-8 lamps. The best way to realize the benefits of super T-8 lighting systems is through the use of low ballast factor ballasts, which provide the same light output with super T-8 lamps as conventional T-8 lamps. Assuming a low-ballast factor ballast, the power reduction is about 4.5 W/lamp, for an energy savings of about 14%.

Estimated Measure Costs

According to work done by Eley Associates for the CEC, the first cost differential between 2nd generation lamps and the conventional T-8 lamp is about $2 per lamp (Eley Associates, 2002).

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 44. Super T-8 Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	1,663	$95	$2.00	84	$168	1.8
1735	Office trailer	1,243	$71	$2.00	54	$108	1.5
1886	Storage	1,306	$74	$2.00	86	$172	2.3
2627	Classroom	816	$47	$2.00	48	$96	2.1
2701	Gym/locker	5,695	$325	$2.00	106	$212	0.7
3725	Office modular	10,990	$626	$2.00	788	$1,576	2.5
4128	Retail	433	$25	$2.00	30	$60	2.4
4727	Library	6,416	$366	$2.00	325	$650	1.8
5976	Computer/telecom	3,223	$184	$2.00	168	$336	1.8

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	1,672	$95	$2.00	84	$168	1.8
1735	Office trailer	1,200	$68	$2.00	54	$108	1.6
1886	Storage	1,178	$67	$2.00	86	$172	2.6
2627	Classroom	789	$45	$2.00	48	$96	2.1
2701	Gym/locker	5,327	$304	$2.00	106	$212	0.7
3725	Office modular	10,254	$584	$2.00	788	$1,576	2.7
4128	Retail	412	$23	$2.00	30	$60	2.6
5976	Computer/telecom	3,190	$182	$2.00	168	$336	1.8

High Performance Windows

This measure analysis looked at the economics of upgrading existing windows to high-performance units at replacement time. Tinted, double pane "low-e squared" windows were simulated, with a solar heat gain coefficient of 0.31 and U-value of 0.49.

Estimated Measure Costs

Replacement window costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the incremental costs for installing

a high-performance low-e squared window is $3.48 per square foot. Full costs are estimated at $26.00 per square foot.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 45. High Performance Replacement Window Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	969	$55	$3.48	149.6	$521	9.4
1735	Office trailer	-305	-$17	$3.48	610	$2,123	never
1886	Storage	591	$34	$3.48	422	$1,469	43.6
2627	Classroom	390	$22	$3.48	110	$383	17.2
2701	Gym/locker	120	$7	$3.48	75	$261	38.2
3725	Office modular	4,266	$243	$3.48	2010	$6,995	28.8
4128	Retail	29	$2	$3.48	55	$191	115.8
4727	Library	822	$47	$3.48	1122	$3,905	83.3
5976	Computer/telecom	731	$42	$3.48	150	$522	12.5

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	962	$55	$3.48	149.6	$521	9.5
1735	Office trailer	-34	-$2	$3.48	610	$2,123	never
1886	Storage	765	$44	$3.48	422	$1,469	33.7
2627	Classroom	389	$22	$3.48	110	$383	17.3
2701	Gym/locker	165	$9	$3.48	75	$261	27.8
3725	Office modular	4,962	$283	$3.48	2010	$6,995	24.7
4128	Retail	55	$3	$3.48	55	$191	61.1
5976	Computer/telecom	726	$41	$3.48	150	$522	12.6

Door and Window Sealing

The Level 1 surveys indicated that window seals were generally in good condition. However, a significant number of sites indicated that door seals were in need of repair. Energy savings were evaluated assuming a 30 cfm average infiltration rate reduction per door sealed.

Estimated Measure Costs

Door weather stripping costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the cost for installing weather stripping on an entry door is $38 per door.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 46. Door Sealing Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	-182	-$10	$38	2	$76	never
1735	Office trailer	-92	-$5	$38	3	$114	never
1886	Storage	57	$3	$38	2	$76	23.4
2627	Classroom	-100	-$6	$38	3	$114	never
2701	Gym/locker	-187	-$11	$38	4	$152	never
3725	Office modular	149	$8	$38	6	$228	26.8
4128	Retail	9	$1	$38	2	$76	148.1
4727	Library	356	$20	$38	3	$114	5.6
5976	Computer/telecom	0	$0	$38	2	$76	never

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	-198	-$11	$38	2	$76	never
1735	Office trailer	-15	-$1	$38	3	$114	never
1886	Storage	198	$11	$38	2	$76	6.7
2627	Classroom	-66	-$4	$38	3	$114	never
2701	Gym/locker	-47	-$3	$38	4	$152	never
3725	Office modular	615	$35	$38	6	$228	6.5
4128	Retail	166	$9	$38	2	$76	8.0
5976	Computer/telecom	0	$0	$38	2	$76	never

Remaining Lighting

Lighting retrofit opportunities include retrofit of existing fluorescent fixtures at a few buildings without T-8 lamps, CFL replacements for incandescent lighting, and LED exit signs in buildings with incandescent exit signs. Moreover, since most of the exterior lighting is already controlled via photocells or time clocks, the audit focused on exterior lighting left energized during daylight hours

Estimated Measure Costs

CFL and LED exit sigh costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the cost for CFL replacement of incandescent lamps is $10/lamp for materials plus $5/lamp for labor. Costs to install LED exit

signs were listed as $41 for material plus $53 for labor. An LED upgrade kit for existing exit signs is listed for $10 for materials and $22 for labor. New two lamp T-8 fixtures are listed for $75/fixture for materials and $15/fixture for labor. Exterior photocell controller costs are estimated as follows:

Material: $50/switch (Grainger)
Installation: 1 hr at $65/hr
Total: $115.

Energy Impacts and Simple Payback

The energy impacts of these measures were not simulated, due to the sporadic occurrence of non T-8 and incandescent lamps, incandescent exit signs and exterior lighting fixtures without controls. The energy savings were estimated for each building where the opportunity existed to apply the measure. A summary of the calculations is shown in the Table below. A detailed summary of the savings by building and fixture is shown in the Appendix.

Table 47. Remaining Lighting Measure Energy Savings and Simple Payback

Measure	# fixtures	KWh savings	Energy cost savings	Measure cost	SPB
Remaining interior lighting (T-8s and CFLs)	972	150,544	$8,581	$30,963	3.6
Remaining exterior lighting	58	37,865	$2,158	$6,670	3.1
LED exit signs	13	4,765	$272	$416	1.5
Total	1043	193,174	$11,011	$38,049	3.5

Occupancy Sensors

This measure evaluated adding wall-mounted occupancy sensors in intermittently occupied spaces.

Estimated Measure Costs

Occupancy sensor costs were estimated using information from the California Database for Energy Efficiency Resources (DEER). According to DEER, the cost for installing a wall mounted occupancy sensor is $42 for materials and $4.20 for labor per sensor installed. Sensors applied to a 120 SF private office cost about $0.40 per square foot.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 48. Occupancy Sensor Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,380	$136	$0.40	2,088	$835	6.2
1735	Office trailer	1,773	$101	$0.40	3,316	$1,326	13.1
1886	Storage	1,862	$106	$0.40	3,024	$1,210	11.4
2627	Classroom	1,162	$66	$0.40	1,824	$730	11.0
2701	Gym/locker	8,127	$463	$0.40	2,880	$1,152	2.5
3725	Office modular	15,645	$892	$0.40	24,192	$9,677	10.9
4128	Retail	615	$35	$0.40	866	$346	9.9
4727	Library	9,179	$523	$0.40	9,605	$3,842	7.3
5976	Computer/telecom	4,594	$262	$0.40	5,589	$2,236	8.5

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	2,390	$136	$0.40	2,088	$835	6.1
1735	Office trailer	1,711	$98	$0.40	3,316	$1,326	13.6
1886	Storage	1,690	$96	$0.40	3,024	$1,210	12.6
2627	Classroom	1,125	$64	$0.40	1,824	$730	11.4
2701	Gym/locker	7,583	$432	$0.40	2,880	$1,152	2.7
3725	Office modular	14,562	$830	$0.40	24,192	$9,677	11.7
4128	Retail	586	$33	$0.40	866	$346	10.4
5976	Computer/telecom	4,553	$260	$0.40	5,589	$2,236	8.6

Plug Load Controllers

The plug load controller functions by turning office power devices on and off based on occupancy. An occupancy sensor connects to a power strip with a cable. The power strip contains 6 outlets controlled by occupancy and 2 outlets, which are uncontrolled. The system automatically turns all connected devices on when the workspace becomes occupied. Connected devices will turn off after the space is unoccupied and the time delay elapses. Surge protection capability is also provided.

Estimated Measure Costs

Measure costs of $95/unit were obtained from The Watt Stopper web site.

Model Building Energy Impacts and Simple Payback

The energy savings, energy cost savings and measure costs by heating system type are shown in the Table below:

Table 49. Plug Load Controller Energy Savings and Simple Payback

Heating System: Heat Pump

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	3,854	$220	$100	8	$800	3.6
1735	Office trailer	1,773	$101	$100	11	$1,100	10.9
1886	Storage	567	$32	$100	3	$300	9.3
2627	Classroom	311	$18	$100	3	$300	16.9
2701	Gym/locker	n/a					
3725	Office modular	11,440	$652	$100	66	$6,600	10.1
4128	Retail	1,198	$68	$100	3	$300	4.4
4727	Library	n/a					
5976	Computer/telecom	3,473	$198	$100	20	$2,000	10.1

Heating System: Electric Resistance

Model Building	Description	kWh savings	Energy cost savings	Measure unit cost	Units	Measure cost	SPB
1602	Shop/lab	3,866	$220	$100	8	$800	3.6
1735	Office trailer	1,711	$98	$100	11	$1,100	11.3
1886	Storage	506	$29	$100	3	$300	10.4
2627	Classroom	296	$17	$100	3	$300	17.8
2701	Gym/locker	n/a					
3725	Office modular	10,043	$572	$100	66	$6,600	11.5
4128	Retail	1,057	$60	$100	3	$300	5.0
5976	Computer/telecom	3,355	$191	$100	20	$2,000	10.5

High-Efficiency Appliances

This measure examined replacing existing refrigerators with high efficiency units upon unit failure. The impact of this measure was not simulated, due to limited HVAC interactions. A simple spreadsheet calculation was used. According to the DEER database, baseline energy usage for a 23 cu. ft. model with top-mounted freezer is 523 kWh per year. An equivalent Energy Star model uses 479 kWh/yr, for an annual savings of 44 kWh/yr. Energy cost savings is estimated at an average of $2.51 per refrigerator per year.

Estimated Measure Costs

The incremental cost for upgrading to an Energy Star refrigerator was estimated using information from the DEER database. According to the DEER, the upgrade cost is $79/unit for a 23 cu. ft. top mounted freezer model. The simple payback on this upgrade is 31.5 yr.

Water Heating

This measure examined adding pipe and tank insulation to existing electric water heaters. The impact of this measure was not simulated, due to limited HVAC interactions. A simple spreadsheet calculation was used, based on savings estimates from the DEER database. According to the California DEER update study, water heater blankets save about 315 kWh/yr. Pipe insulation near the water heater saves an additional 33 kWh/yr. This assumes a standard residential sized electric water heater with an energy factor of 0.88. Energy cost savings is $19.84 per year.

Estimated Measure Costs

The incremental cost for adding a water heater wrap was estimated using information from the California DEER. According to DEER, water heater blanket costs are $17 for an R-10 blanket. Pipe insulation near the water heater costs $2.33. The simple payback for this measure 1.0 years.

Facility Energy Savings Analysis

The first step in estimating the facility-wide savings was to normalize the energy savings obtained from the model building simulations. The model building energy savings for each simulated measure, normalized by the appropriate extension measure are shown in the Table below:

Table 50. Energy Savings by Model Building and Extension Measure

Heating system: Heat Pump

Measures	Unit	Bld. 1602	Bld. 1735	Bld. 1886	Bld. 2627	Bld. 2701	Bld. 3725	Bld. 4128	Bld. 4727	Bld. 5976
		Shop/lab	Office trailer	Storage	Classroom	Gym/locker	Office modular	Retail	Library	Computer/telecom
AC tune up, set back	kWh/ton	554	479	450	292		334	316		879
AC tune up, no set back	kWh/ton	616	674	565	382	403	430	468		959
Scheduling, no set back	kWh/ton	660	1318	810	879		736	523		505
Scheduling, with set back	kWh/ton	299	589	445	444		446	129		274
Cool roof	kWh/SF	0.60	0.40	0.27	0.60	0.50	0.25	0.31	0.23	0.43
HVAC early replacement	kWh/ton	794	374	280	471	1257	111	226	410	2263
Economizer with DCV	kWh/ton	227	25	49	264	788	33	215		387
Evaporative cooler	kWh/ton	1338	651	437	1031	1947	347	621		3196
Daylighting control	kWh/window SF	40.3	8.4	15.6	26.7	138.6	12.6	42.6	7.1	51.4
Radiant barrier	kWh/SF	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.01
Roof insulation replacement	kWh/SF	0.07	0.08	0.11	0.09	0.11	0.09	0.07	0.09	0.02
Skylight	kWh/Skylight SF	48.6	14.1	17.5	25.3	101.5	57.6	30.0	28.0	49.4
Super T8	kWh/SF	0.80	0.37	0.43	0.45	1.98	0.45	0.50	0.67	0.58
High performance window early repl.	kWh/window SF	5.57	-0.50	4.12	3.89	4.96	3.91	1.47	1.79	5.57
Door sealing	kWh/SF	-0.09	-0.03	0.02	-0.05	-0.06	0.01	0.01	0.04	0.00
Occupacy sensor on lighting	kWh/SF	1.14	0.53	0.62	0.64	2.82	0.65	0.71	0.96	0.82
Plug load control	kWh/SF	1.85	0.53	0.19	0.17		0.47	1.38		0.62
High perf windows repl on failure	kWh/window SF	6.48	-0.50	1.40	3.55	1.60	2.12	0.53	0.73	4.87
High efficiency HVAC repl on fail	kWh/ton	449	273	238	526	1082	236	501	410	1767
Window Shading - N	kWh/SF-del SHGC	14.0	5.3	6.5	10.3	11.1	11.0	7.1	6.3	16.9
Window Shading - E	kWh/SF-del SHGC	32.2	21.5	16.7	20.7	19.0	13.9	12.9	10.8	23.3
Window Shading - S	kWh/SF-del SHGC	29.1	26.3	7.0	15.3	12.5	14.5	7.8	5.2	20.4
Window Shading - W	kWh/SF-del SHGC	14.3	20.0	16.6	13.6	14.3	9.9	14.3	13.4	12.3

Table 48. Energy Savings by Model Building and Extension Measure (continued)
Heating System: Electric Resistance

Measures	Unit	Bld. 1602	Bld. 1735	Bld. 1886	Bld. 2627	Bld. 2701	Bld. 3725	Bld. 4128	Bld. 4727	Bld. 5976
		Shop/lab	Office trailer	Storage	Classroom	Gym/locker	Office modular	Retail	Library	Computer/telecom
AC tune up, set back	kWh/ton	550	376	370	220		260	320		858
AC tune up, no set back	kWh/ton	607	482	460	231	326	336	440		909
Scheduling, no set back	kWh/ton	535	1517	850	1085		933	715		527
Scheduling, with set back	kWh/ton	246	646	447	503		538	102		265
Cool roof	kWh/SF	0.60	0.35	0.20	0.55	0.47	0.17	0.25		0.41
HVAC early replacement	kWh/ton	784	460	418	518	1404	263	337		2271
Economizer with DCV	kWh/ton	228	26	48	264	788	32	236		387
Evaporative cooler	kWh/ton	1327	736	575	1077	2094	498	732		3204
Daylighting control	kWh/window SF	40.4	8.1	14.4	26.1	130.1	11.7	40.8		51.0
Radiant barrier	kWh/SF	0.03	0.04	0.06	0.06	0.06	0.05	0.05		0.02
Roof insulation replacement	kWh/SF	0.06	0.12	0.17	0.15	0.17	0.16	0.13		0.03
Skylight	kWh/Skylight SF	49.0	12.4	12.4	23.4	98.2	52.3	26.3		48.7
Super T8	kWh/SF	0.80	0.36	0.39	0.43	1.85	0.42	0.48		0.57
High performance window early repl.	kWh/window SF	5.41	-0.06	5.24	4.43	6.43	5.71	2.89		5.81
Door sealing	kWh/SF	-0.09	0.00	0.07	-0.04	-0.02	0.03	0.19		0.00
Occupacy sensor on lighting	kWh/SF	1.14	0.52	0.56	0.62	2.63	0.60	0.68		0.81
Plug load control	kWh/SF	1.85	0.52	0.17	0.16	n/a	0.42	1.22		0.60
High perf windows repl on failure	kWh/window SF	6.43	-0.06	1.81	3.54	2.20	2.47	1.00		4.84
High efficiency HVAC repl on fail	kWh/ton	448	376	387	569	1205	362	581		1777
Window Shading - N	kWh/SF-del SHGC	14.1	4.1	4.6	10.0	10.5	8.2	5.8		16.2
Window Shading - E	kWh/SF-del SHGC	32.2	19.3	13.0	18.4	16.9	4.3	9.2		22.1
Window Shading - S	kWh/SF-del SHGC	29.6	25.7	-3.2	11.5	0.7	5.2	3.9		18.7
Window Shading - W	kWh/SF-del SHGC	12.2	17.7	12.5	12.3	12.2	6.9	12.5		11.7

The facility wide energy savings potential was calculated for a select set of measures that have reasonable payback and are otherwise desirable to the LLNL facilities staff. The selected measures are listed below:

11. HVAC Tune-up. This is considered to be a "core measure," based on the energy savings opportunity and the impact on thermal comfort. All HVAC units in the study are assumed to be tuned up under this measure. See the Appendix for a detailed calculation by building and HVAC unit.
12. HVAC system scheduling. This is also considered to be a "core measure," based on the energy savings opportunity and ability to control units centrally during a shelter-in-place event. All HVAC units in the study are assumed to be controlled under this measure. See the Appendix for a detailed calculation by building and HVAC unit.
13. Cool roof. Savings estimates for the measure were applied to all roofs scheduled for replacement in the LLNL deficiency list. See the Appendix for a detailed calculation by building.
14. Window shading. Savings estimates for the measure were applied to all non-north facing windows. Although the simple payback is not a good for this measure, it should be considered for the associated benefits on thermal comfort and to alleviate some of the zoning and thermostat placement issues.
15. HVAC upgrade at normal replacement. Savings estimates for the measure were applied to all HVAC units scheduled for replacement on the LLNL deficiency list. A total of 642 units (about 55% of the total) are on the replacement list, so this represents a major opportunity. See the Appendix for a detailed calculation by building and HVAC unit.
16. Indirect/direct evaporative cooling. Savings estimates for the measure were applied to all HVAC units scheduled for replacement on the LLNL deficiency list. See the Appendix for a detailed calculation by building and HVAC unit. Due to the magnitude of the potential energy savings, this measure should be considered as the new generation IDEC systems become commercially available.
17. Super T-8's. Savings estimates for this measure were applied to all buildings in the study, assuming that the new generation lamps will be rotated in during normal lamp replacement operations. See the Appendix for a detailed calculation by building.
18. Occupancy sensors. Savings estimates for this measure were applied to buildings surveyed as candidates for occupancy sensors during the Level 1 audits. See the Appendix for a detailed calculation by building.
19. Remaining Lighting. Savings for this measure were calculated for each eligible fixture identified during the Level 1 Audits. See the Appendix for a detailed calculation by building and fixture.
20. Water Heating. Water heater and pipe insulation savings were calculated for storage water heaters. The number of storage water heaters in the study was estimated from the total number of buildings and the frequency of storage water heaters observed during the Level 2 audits, assuming one storage water heater per building.

Estimates of facility wide savings for each of the selected measures are summarized in the Table below:

Table 51. Facility-Wide Energy Savings for Selected Measures

Measure	Units Treated	Energy Savings	Energy Cost Savings	Project Costs[4]	SPB
HVAC Tune-up	1,175	1,667,596	$95,053	$377,320	4.0
HVAC system scheduling	1,175	3,060,105	$187,187	$987,000	5.3
Cool Roof	298,254 SF	98,576	$5,619	$29,825	5.3
Window shading (E, S, and W only)	58,156 SF	303,456	$17,297	$206,266	11.9
HVAC Upgrade	642	725,513	$41,354	$174,489	4.2
IDEC upgrade	642	1,383,907	$78,883	$775,250	9.8
Super T-8	901,651 SF	399,051	$22,746	$46,401	2.0
Occupancy Sensors	370,619 SF	243,602	$13,885	$148,248	10.7
Remaining lighting	1043 fixtures	193,174	$11,011	$38,049	3.5
Water heater and pipe insulation	126 water heaters	43,938	$2,504	$2,441	1.0

Water Conservation Measures – Watergy Screening

This section briefly describes the Watergy screening tool and the recommended water-related energy conservation measures. The input and output reports used by the Watergy program can be found in the Appendix.

Watergy analyzes water and energy savings associated with water conservation measures. Internal assumptions and user inputs are used to calculate, through the use of a series of spreadsheets, water conservation economics including capital cost[5], direct energy and water savings (passed on to the customer), indirect savings (passed on to the utility) and direct payback for potential water conservation measures. Many of the inputs used by Watergy are based on assumptions originally presented in a paper at the CONSERV'96 conference, entitled "WATERGY: A Water and Energy Conservation Model for Federal Facilities," by Dr. Sharon de Monsabert and Barry L. Liner.

The general purpose of Watergy is to screen potential water conservation measures for cost-effectiveness using building water and energy consumption characteristics. Watergy is a tool that is used to estimate the preliminary economic viability of water conservation measures. Watergy inputs and calculations are based on assumptions that could affect resulting cost-effectiveness. The results of Watergy should aid in the assessment of water conservation measures. Cost-effective water conservation measures should be further investigated before implementation and design.

[4] Estimated Measure Costs are developed as "contractor" prices, not including LLNL internal and overhead costs which differ depending on sources of funding used for implementation

[5] Water conservation measure costs are "default" costs from the Watergy program, and may not reflect actual costs to LLNL.

Summary of Results for Recommended Water Conservation Measures

The outputs resulting from the Watergy screening process (Table 52) indicate three applicable measures, as described below:

ULF Toilets and ULF Urinals

Installation of low flow toilets and urinals could reduce the amount of water used by 1.9 gallons per flush for toilets, or 0.5 gallons per use for urinals. The resulting cost savings associated with installation of low flow toilets and urinals would be due to the reduction of electric pumping and water usage.

Low Flow Showerheads

Installation of low flow showerheads reduces the water usage by reducing flow out of the showerhead. Installation of low flow showerheads includes replacement of existing showerheads.

Automatic Faucets (Not Recommended)

Installation of automatic faucets reduces the water usage by controlling/limiting faucet water usage using motion sensor controls. Implementation of this water conservation measure would require replacement of the (410) existing lavatory faucets. This measure is not recommended, due to the long simple payback estimated.

Table 52. Watergy Analyzed Water Conservation Opportunities, Savings Summary

Conservation Method	Number of Installations	Total Initial Cost ($)	Annual Savings ($)			Payback Period* (yrs) *Includes Direct Energy Only
			Direct Water	Direct Energy	Indirect Energy	
Installation of ULF toilets and WATERLESS urinals	473	$184,745	$37,245	-$1	$3,639	4.96
Installation of automatic faucets	411	$135,300	$4,343	$1,116	$448	24.78
Installation of faucet aerators	0	$0	$0	$0	$0	#N/A
Low Flow showerhead	45	$1,395	$1,238	$382	$129	0.86
Boiler blowdown optimization	0	$0	$0	$0	$0	#N/A
Efficient dishwashers	0	$0	$0	$0	$0	#N/A
Efficient washing machines	0	$0	$0	$0	$0	#N/A
Landscape irrigation optimization	#N/A	$0	$0	$0	$0	Annual
Total (excluding Landscape)		**$321,440**	**$42,827**	**$1,496**	**$4,217**	**7.25**

Of these, the ULF toilets, waterless urinals and low flow showerheads have an acceptable payback period, and are subsequently deemed worthy of consideration for this facility. The measure payback period and cash flow is shown in the Figure below:

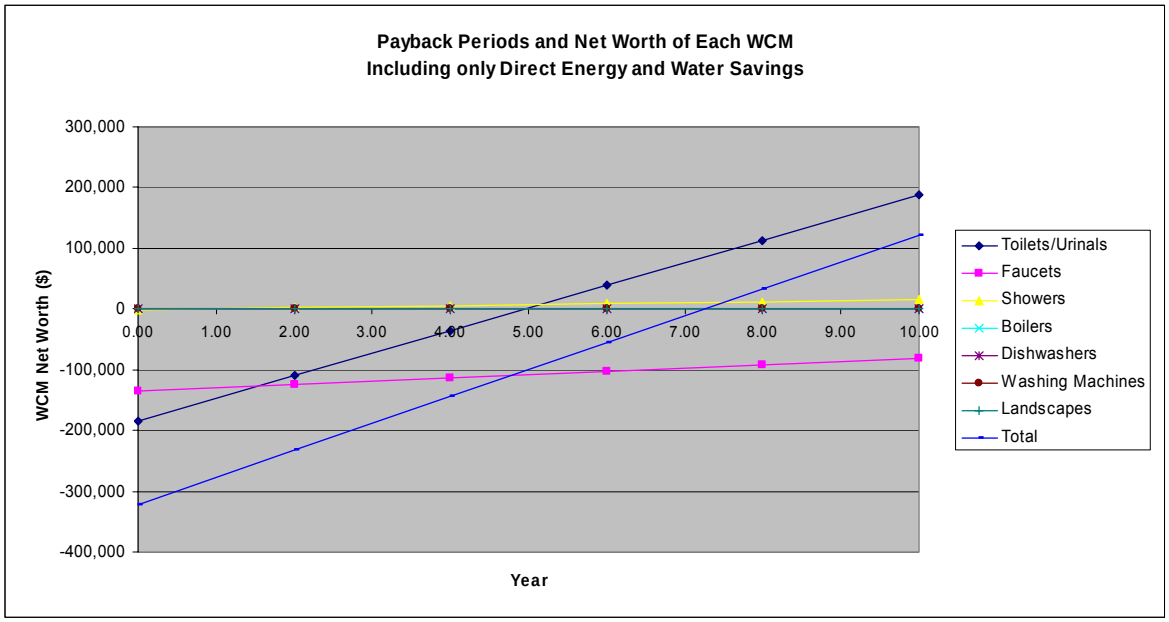


Figure 51. Watergy Cash Flow Analysis

UCRL-TR-214484

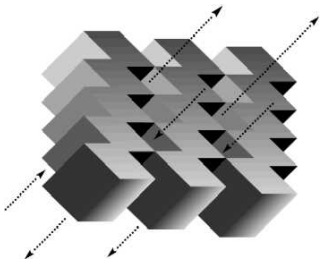
Phase II Audit Report Appendices

Energy & Water Audits of LLNL Facilities

May 25, 2005

Submitted to:

Lawrence Livermore National Laboratory



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Appendix A: Level 1 and 2 Survey Status

Table A-1 Level 1 Surveys Completed

Building ID	Model/Similar Building Classification	Date Surveyed
110	Storage	03-Mar-04
1253	Foodservice/retail	03-Mar-04
1277	Office - trailer	04-Mar-04
1280	Office - trailer	04-Mar-04
134	Storage	26-Feb-04
135	Storage	27-Feb-04
1401	Office - trailer	03-Mar-04
1402	Office - trailer	03-Mar-04
1403	Office - trailer	04-Mar-04
1404	Office - trailer	03-Mar-04
1405	Office - trailer	03-Mar-04
1406	Office - trailer	03-Mar-04
1407	Locker/Exercise	03-Mar-04
1408	Locker/Exercise	03-Mar-04
1413	Office - trailer	03-Mar-04
1481	Office - trailer	20-Feb-04
1492	Office - trailer	27-Feb-04
1526	Office - trailer	20-Feb-04
1527	Office - trailer	20-Feb-04
1541	Office - trailer	20-Feb-04
1578	Office - trailer	20-Feb-04
1579	Office - trailer	20-Feb-04
1601	Office - trailer	20-Feb-04
1602	Office - trailer	20-Feb-04
1632	Office - trailer	03-Mar-04
164	Shop/ Lab	26-Feb-04
1677	Office - modular	04-Mar-04
1678	Office - trailer	26-Feb-04
1713	Locker/Exercise	18-Feb-04
1714	Locker/Exercise	18-Feb-04
1715	Office - trailer	27-Feb-04
1726	Office - trailer	18-Feb-04
1727	Office - trailer	18-Feb-04
1735	Office - modular	18-Feb-04
1736	Office - modular	03-Mar-04
1739	Office - trailer	18-Feb-04
1802	Locker/Exercise	27-Feb-04
1830	Office - trailer	18-Feb-04
1884	Office - trailer	17-Feb-04
1885	Office - trailer	17-Feb-04
1886	Office - trailer	17-Feb-04
1887	Office - trailer	27-Feb-04
1888	Office - modular	18-Feb-04
1889	Classroom/conference	19-Feb-04

1925	Office - modular	18-Feb-04
1927	Office - trailer	10-Sep-04
193A	Shop/ Lab	18-Feb-04

Table A-1. Level 1 Surveys Completed (Contd.)

Building ID	Model/Similar Building Classification	Date Surveyed
194A	Office - trailer	18-Feb-04
195	Shop/ Lab	18-Feb-04
196A	Storage	18-Feb-04
198	Shop/ Lab	18-Feb-04
211	Office - modular	26-Feb-04
2127	Office - modular	26-Feb-04
2128	Office - trailer	26-Feb-04
2177	Office - trailer	26-Feb-04
2180	Office - trailer	03-Mar-04
2475	Office - trailer	27-Feb-04
252	Storage	26-Feb-04
2525	Office - modular	26-Feb-04
2552	Office - trailer	04-Mar-04
2554	Office - trailer	26-Feb-04
2580	Office - modular	04-Mar-04
2625	Locker/Exercise	19-Feb-04
2627	Classroom/conference	19-Feb-04
2679	Office - trailer	19-Feb-04
2684	Office - trailer	19-Feb-04
2685	Office - trailer	04-Mar-04
2687	Office - trailer	04-Mar-04
2701	Locker/Exercise	19-Feb-04
2726	Office - trailer	19-Feb-04
2727	Office - trailer	19-Feb-04
2728	Office - trailer	19-Feb-04
2775	Office - trailer	19-Feb-04
2777	Office - trailer	04-Mar-04
2801	Shop/ Lab	19-Feb-04
2802	Shop/ Lab	19-Feb-04
2804	Office - trailer	19-Feb-04
2808	Locker/Exercise	19-Feb-04
2825	Office - modular	19-Feb-04
2925	Office - modular	18-Feb-04
3180	Office - trailer	26-Feb-04
3204	Locker/Exercise	03-Mar-04
3226	Office - modular	03-Mar-04
328	Shop/ Lab	26-Feb-04
328B	Storage	26-Feb-04
3520	Office - modular	19-Feb-04
3526	Office - modular	26-Feb-04
3527	Office - modular	04-Mar-04
3555	Office - trailer	26-Feb-04
3577	Office - modular	19-Feb-04
3649	Library	26-Feb-04
367	Shop/ Lab	26-Feb-04
3703	Office - modular	26-Feb-04

Table A-1. Level 1 Surveys Completed (Contd.)

Building ID	Model/Similar Building Classification	Date Surveyed
3724	Office - modular	25-Feb-04
3725	Office - modular	25-Feb-04
3726	Office - modular	25-Feb-04
3751	Office - trailer	25-Feb-04
376	Shop/ Lab	26-Feb-04
3775	Office - trailer	25-Feb-04
3777	Office - modular	25-Feb-04
379	Shop/ Lab	26-Feb-04
3925	Classroom/conference	20-Feb-04
406	Office - modular	24-Feb-04
4107	Storage	24-Feb-04
4161	Office - trailer	26-Feb-04
4180	Office - trailer	24-Feb-04
4184	Office - trailer	24-Feb-04
4302	Office - trailer	03-Feb-04
4316	Storage	23-Feb-04
4325	Office - trailer	23-Feb-04
4352	Shop/ Lab	27-Feb-04
4378	Office - trailer	23-Feb-04
4382	Office - trailer	23-Feb-04
4383	Office - trailer	23-Feb-04
4385	Office - trailer	23-Feb-04
4387	Office - trailer	23-Feb-04
4388	Locker/Exercise	23-Feb-04
4406	Communications/computer	23-Feb-04
4407	Storage	23-Feb-04
4442	Office - trailer	23-Feb-04
446	Shop/ Lab	23-Feb-04
4475	Shop/ Lab	23-Feb-04
4525	Office - modular	19-Feb-04
4576	Office - modular	04-Mar-04
4675	Foodservice/retail	25-Feb-04
4726	Office - modular	25-Feb-04
4727	Library	25-Feb-04
4729	Library	25-Feb-04
473	Storage	25-Feb-04
4924	Office - trailer	27-Feb-04
501	Office - trailer	24-Feb-04
5104	Office - trailer	24-Feb-04
5105	Office - trailer	23-Feb-04
517-A	Storage	27-Feb-04
518-A	Office - trailer	27-Feb-04
519A	Storage	03-Mar-04
520	Storage	24-Feb-04
5207	Storage	24-Feb-04
5225	Office - trailer	24-Feb-04

Table A-1. Level 1 Surveys Completed (Contd.)

Building ID	Model/Similar Building Classification	Date Surveyed
5226	Shop/ Lab	24-Feb-04
523	Shop/ Lab	24-Feb-04
531	Office - modular	23-Feb-04
532	Storage	23-Feb-04
533	Storage	23-Feb-04
5425	Office - trailer	23-Feb-04
5426	Office - trailer	23-Feb-04
5475	Office - modular	24-Feb-04
5479	Office - trailer	23-Feb-04
5626	Office - modular	27-Feb-04
5627	Office - modular	27-Feb-04
5675	Office - modular	27-Feb-04
571	Office - modular	24-Feb-04
5974	Office - trailer	20-Feb-04
5975	Office - trailer	20-Feb-04
5976	Office - trailer	20-Feb-04
5978	Office - trailer	20-Feb-04
5979	Office - trailer	20-Feb-04
5980	Office - trailer	20-Feb-04
5981	Office - trailer	20-Feb-04
5983	Office - trailer	20-Feb-04
5984	Office - trailer	20-Feb-04
5985	Office - trailer	20-Feb-04
612A	Storage	24-Feb-04
614	Storage	24-Feb-04
6178	Locker/Exercise	24-Feb-04
6179	Office - modular	24-Feb-04
619	Locker/Exercise	24-Feb-04
6203	Locker/Exercise	23-Feb-04
6205	Office - trailer	23-Feb-04
622	Storage	24-Feb-04
623	Storage	24-Feb-04
625	Storage	24-Feb-04
6325	Office - modular	23-Feb-04
639	Storage	23-Feb-04
6501	Office - trailer	25-Feb-04
6525	Classroom/conference	25-Feb-04
6526	Office - modular	25-Feb-04
6575	Classroom/conference	25-Feb-04
671	Office - modular	24-Feb-04
684	Storage	20-Feb-04
6870	Office - trailer	20-Feb-04
6925	Office - modular	20-Feb-04
6926	Office - trailer	20-Feb-04
6928	Office - trailer	20-Feb-04
6951	Office - trailer	20-Feb-04
9324	Office - trailer	23-Feb-04

Table A-2. Level 2 Surveys Completed

Building ID	Model/Similar Building Classification	Date Surveyed
382	Office - trailer	20-Feb-04
624	Office - trailer	24-Feb-04
1456	Office - modular	26-Feb-04
1680	Office - trailer	20-Feb-04
1730	Office - trailer	18-Feb-04
1826	Office - trailer	17-Feb-04
1879	Classroom/conference	18-Feb-04
2787	Locker/Exercise	19-Feb-04
3203	Shop/ Lab	03-Mar-04
3427	Office - trailer	27-Feb-04
4128	Foodservice/retail	03-Mar-04
4182	Office - trailer	24-Feb-04
4377	Office - trailer	23-Feb-04
4725	Communications/computer	23-Feb-04
4728	Office - modular	25-Feb-04
5125	Office - trailer	23-Feb-04
5982	Office - trailer	27-Feb-04
6127	Office - trailer	23-Feb-04
6527	Office - modular	25-Feb-04

Appendix B: Level 1 Audit Form

General Information – Level 1

Surveyor Name: Building ID:

Date: Primary Contact: Phone:

Circle the appropriate building type description:

Classroom/conference	Office - trailer	Office - modular
Communications/computer	Library	Shop/ Lab
Foodservice/retail	Locker/Exercise	Storage

Building Schedule

Day of Week	Open	Close
M-F		
Sat		
Sun/Holiday		

Thermostats
Qty Surveyed_____ Qty Programmable_____

Windows

Orient	Qty and Size	Area (SF)	No. Panes	Glass type
				Clear/ tint/ refl
				Clear/ tint/ refl
				Clear/ tint/ refl
				Clear/ tint/ refl
				Clear/ tint/ refl
				Clear/ tint/ refl

Window seal condition: o Good o Poor Door seal condition: o Good o Poor

Ducts

Supply

Location	Construction	Insul?	Condition
o Plenum o Outside .	o Sheet Metal o Flex o Duct Board o None (direct disch)	o	o Disconnected o Visible gaps o Press. Plenum? o Ok

Return

Location	Construction	Insul?	Condition
o Plenum o Outside .	o Sheet Metal o Flex o Duct Board o None (plenum)	o	o Disconnected o Visible gaps o Ok

Roof Insulation Location: **o Roof Deck o Ceiling**

Uncontrolled Exterior Lighting **(Building Mounted Only)**

Fixture Code	Count	Fixture Code	Count

Incandescent Exit Signs

Type	Count	Type	Count
Single side		Double side	

Miscellaneous Equip

Equipment	Quantity	Size	Equipment	Quantity	Size
Dishwasher			Refrig vending machine		
Washer			Non- refrig vend machine		
Dryer			Refrigerators		
Under desk heaters					

Plumbing Fixtures

Equipment	Quantity	Equipment	Quantity
Sink	Aerators	Shower	Low flow
	No Aerators		Standard

Notes Exterior wall damage

Watt stopper use

Occupancy sensor opportunities

Unusual conditions

Lighting (Survey if general lighting system is not fluorescent)

Floor Area_____SF

Check appropriate occupancy

o Auditorium	o Computer center	o Locker room
o Conference room	o Retail, whlse sales flr	o Auto repair workshop
o Courtroom	o Classroom	o General C&I work
o Dining	o Day care	o Precision C&I work
o Kitchen	o Gymnasium	o Storage, warehouse
o Medical / clinical office	o Library	o Other (Describe)
o Office - Other		

Fixture Code	Fixture Count	WD Oper hours	WEH Oper hours
		o Same as occupancy	o Same as occupancy
		o Same as occupancy	o Same as occupancy
		o Same as occupancy	o Same as occupancy
		o Same as occupancy	o Same as occupancy
		o Same as occupancy	o Same as occupancy
		o Same as occupancy	o Same as occupancy
		o Same as occupancy	o Same as occupancy
		o Same as occupancy	o Same as occupancy

Appendix C: Level 2 Audit Form
General Information – Level 2

Surveyor Name: Building ID:

Date: Primary Contact: Phone:

Q1. Circle the appropriate building type description:

Classroom/conference	Office - trailer	Office - modular
Communications/computer	Library	Shop/ Lab
Foodservice/retail	Locker/Exercise	Storage

Building Schedule

Day of Week	Open	Close
M-F		
Sat		
Sun/Holiday		

Room Thermostat Setpoints

Q2. Enter the values for heating and cooling thermostat setpoints during normal (occupied) and setback (unoccupied) periods

Tstat	Setup Time	Setback Time	Heat setpoint	Heat setback	Cool setpoint	Cool setback	Fan Occupied	Fan Unoccupied
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling
P / NP							Cont/cycling	Cont/cycling

Windows

Qty and Size	**Orient** (N, NE, ..)	**No. Panes**	**Glass Type**	**Frame material**	**Meas. Trans.**	Interior Shade	Exterior Shading
			Clear Tint Reflect	Metal Wd/vinyl		Blinds Drapes	Partial Full None
			Clear Tint Reflect	Metal Wd/vinyl		Blinds Drapes	Partial Full None
			Clear Tint Reflect	Metal Wd/vinyl		Blinds Drapes	Partial Full None
			Clear Tint Reflect	Metal Wd/vinyl		Blinds Drapes	Partial Full None
			Clear Tint Reflect	Metal Wd/vinyl		Blinds Drapes	Partial Full None
			Clear	Metal		Blinds	Partial

			Tint Reflect	Wd/vinyl		Drapes	Full None

Window seal condition: o **Good** o **Poor** **Door seal condition:** o **Good** o **Poor**

Ducts

Supply Location	Construction	Insul?	Condition
o Plenum o Outside .	o Sheet Metal o Flex o Duct Board o None (direct disch)	o	o Disconnected o Visible gaps o Press. Plenum? o Ok

Return Location	Construction	Insul?	Condition
o Plenum o Outside .	o Sheet Metal o Flex o Duct Board o None (plenum)	o	o Disconnected o Visible gaps o Ok

Roof Insulation Location: **o Roof Deck o Ceiling**

Hot Water

Type	Qty	Tank Cap	Tank wrap	Pipe Insul	Fuel
Storage Instan Sidearm			o	o	Elec / Other
Storage Instan Sidearm			o	o	Elec / Other

Type	Qty	Tank Cap	Tank wrap	Pipe Insul	Fuel
Storage Instan Sidearm			o	o	Elec / Other
Storage Instan Sidearm			o	o	Elec / Other

Uncontrolled Exterior Lighting **(Building Mounted Only)**

Fixture Code	Count

Fixture Code	Count

Incandescent Exit Signs

Type	Count
Single side	

Type	Count
Double side	

Miscellaneous Equip

Equipment	Quantity	Size
Dishwasher		
Washer		
Dryer		
Under desk heaters		

Equipment	Quantity	Size
Refrig vending machine		
Non- refrig vend machine		
Refrigerators		

Plumbing Fixtures

Equipment	Quantity
Sink	Aerators
	No Aerators

Equipment	Quantity
Shower	Low flow
	Standard

Hot water temperature_____°F

Notes Exterior wall damage

Watt stopper use

Occupancy sensor opportunities

Unusual conditions

Appendix D: Level 3 Audit Form
General Information – Level 3

Surveyor Name: Building ID:

Date: Primary Contact: Phone:

Interview Questions

The following interview questions will be used to help us identify unobservable aspects of your building. These aspects include occupancy history, schedules, and heating and cooling controls. Answers to these questions will be coupled with data collected from our walk-through audit to produce a computer model that simulates the annual energy use of the building.

Building Overview

Q3. What is the overall building floor area? _____sf

Q4. How many floors? _____

Q5. Circle the appropriate building type description:

Classroom/conference	Office - trailer	Office - modular
Communications/computer	Library	Shop/ Lab
Foodservice/retail	Locker/Exercise	Storage

Q6. Which statement best describes the operation of the building?

( ) The entire building operates on *basically* the same schedule
( ) There are areas of the building (departments, tenants, etc.) that have *substantially* different operating schedules

Q7. If different areas of the building (departments, tenants, etc.) have *substantially* different operational schedules, divide the building into up to five areas with differing schedules, and provide a name for each area:

1. _____
2. _____
3. _____
4. _____
5. _____

o **Building-Wide - or -** (fill out only one page)	**Area #___ and Area Name _____** (fill out one page per area)

Schedules

The following questions will help us establish schedules for the building.

Q8. What would be the best way to group the days of the week to describe the operation of this area? One of the three operation levels must be assigned to each day of the week.

	M	Tu	W	Th	F	Sa	Su	Holiday
Full operation:	o	o	o	o	o	o	o	o
Light operation:	o	o	o	o	o	o	o	o
Closed:	o	o	o	o	o	o	o	o

Q9. Are there any months that this area has higher or lower than normal operating hours? Indicate months of increased or decreased operating hours. Normal (100%) is assumed for blank entries.

	Lighting % of Normal	HVAC % of Normal	Equip and Process % of Normal
Jan	____%	____%	____%
Feb	____%	____%	____%
Mar	____%	____%	____%
Apr	____%	____%	____%
May	____%	____%	____%
Jun	____%	____%	____%
Jul	____%	____%	____%
Aug	____%	____%	____%
Sep	____%	____%	____%
Oct	____%	____%	____%
Nov	____%	____%	____%
Dec	____%	____%	____%

Q10. Which holidays are observed (check all that apply)

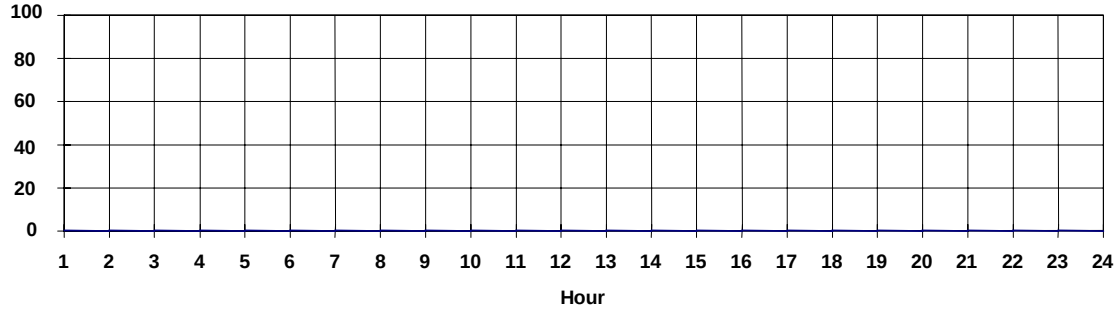
o New Years day o MLK day o Presidents' day o Easter _____ days

o Memorial day o July 4th o Labor day o Columbus day

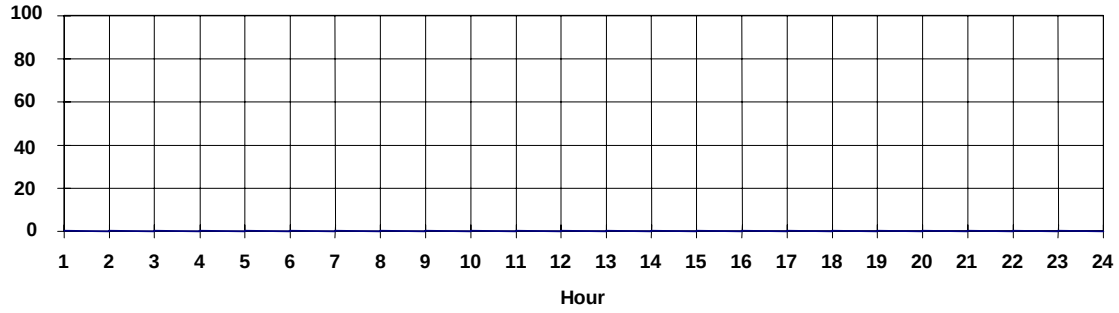
o Veteran's day o Thanksgiving ____ days o Christmas _____

o **Building-Wide - or -**	**Area #___ and Area Name _____**
(fill out only one page)	(fill out one page per area)

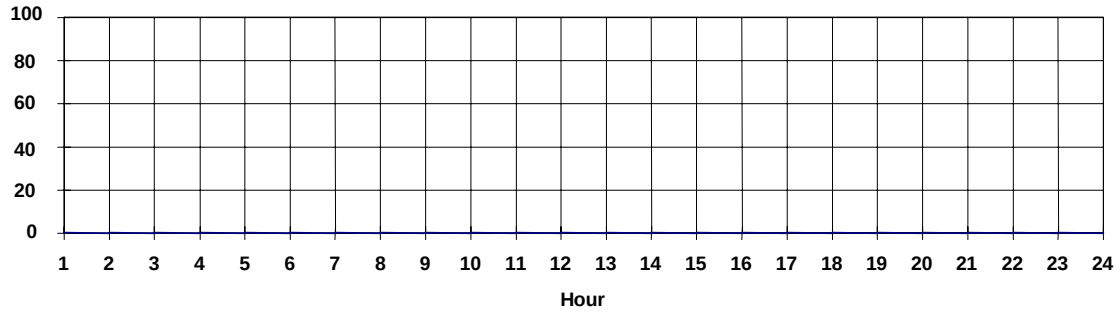
Q11. Draw a line that describes the ***occupancy*** schedule for a ***full operation day***.



Q12. Draw a line that describes the ***occupancy*** schedule for a ***light operation day***.

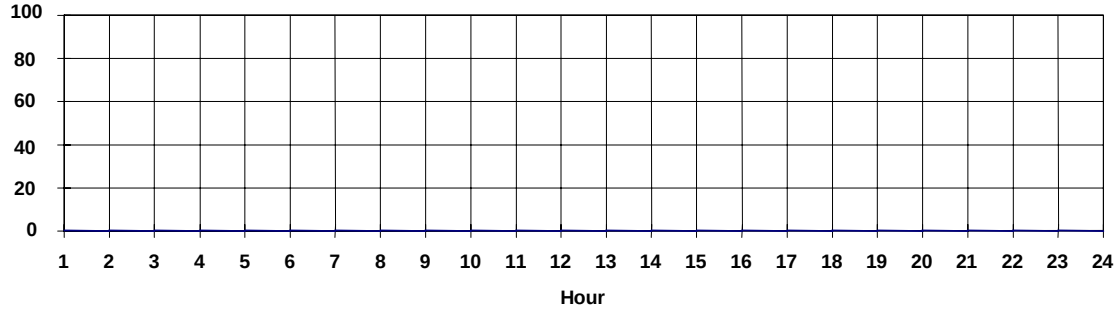


Q13. Draw a line that describes the ***occupancy*** schedule for a ***closed operation day***.

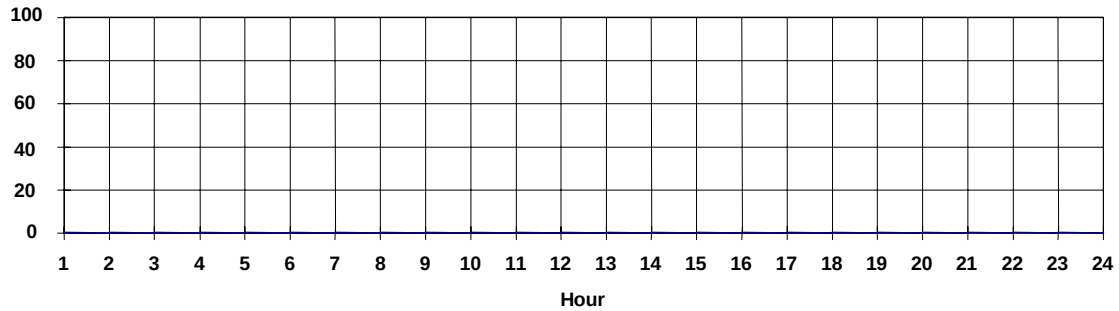


o **Building-Wide - or -**	**Area #___ and Area Name _____**
(fill out only one page)	(fill out one page per area)

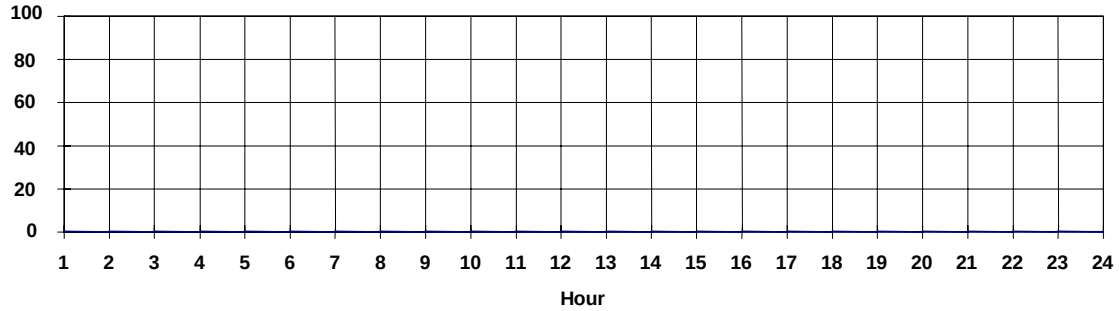
Q14. Draw a line that describes the schedule of use for ***interior lighting*** for a ***full operation day***.



Q15. Draw a line that describes the schedule of use for ***interior lighting*** for a ***light operation day***.



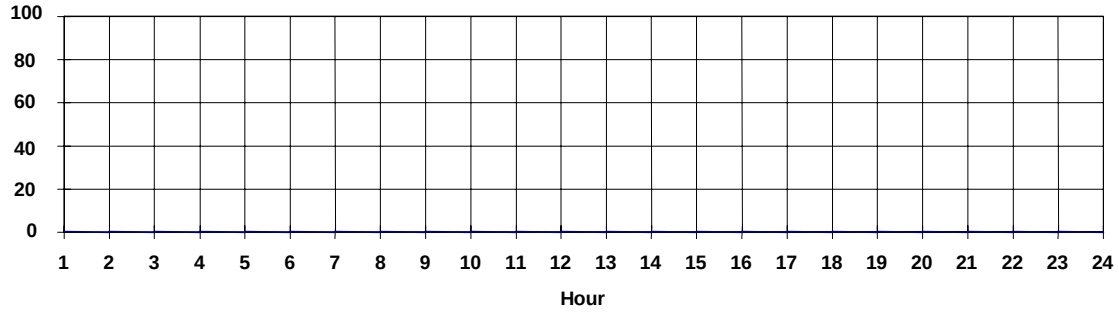
Q16. Draw a line that describes the schedule of use for ***interior lighting*** for a ***closed operation day***.



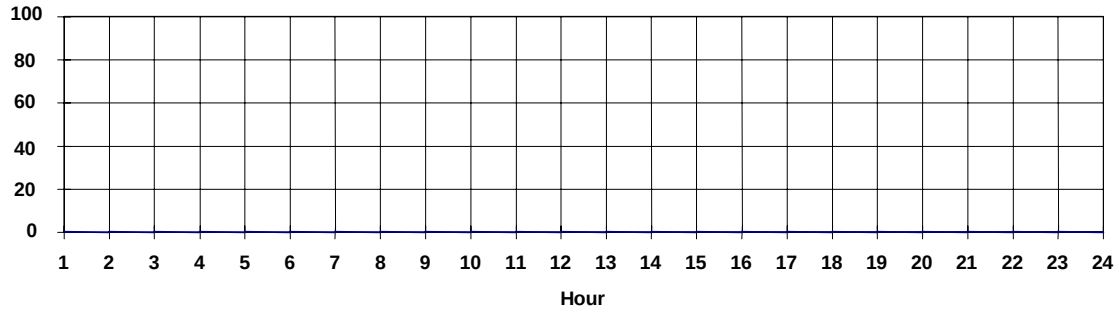
o **Building-Wide - or -** (fill out only one page)	**Area #___ and Area Name _____** (fill out one page per area)

Miscellaneous equipment and plug loads refer to any electrical equipment located in the conditioned space which is not lighting or HVAC

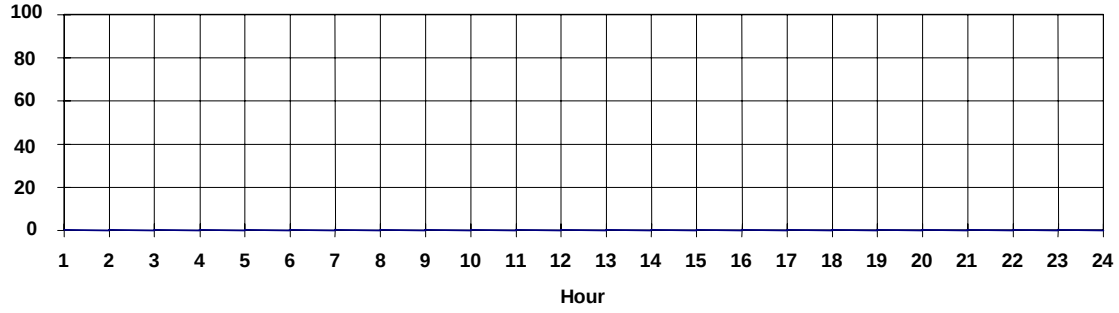
Q17. Draw a line that describes the schedule of use for ***miscellaneous equipment and plug loads*** for a ***full operation day***.



Q18. Draw a line that describes the schedule of use for ***miscellaneous equipment and plug loads*** for a ***light operation day***.



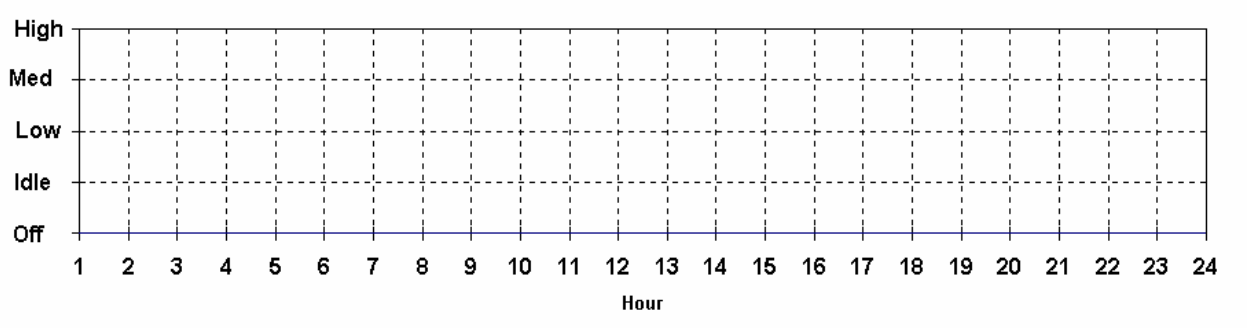
Q19. Draw a line that describes the schedule of use for ***miscellaneous equipment and plug loads*** for a ***closed operation day***.



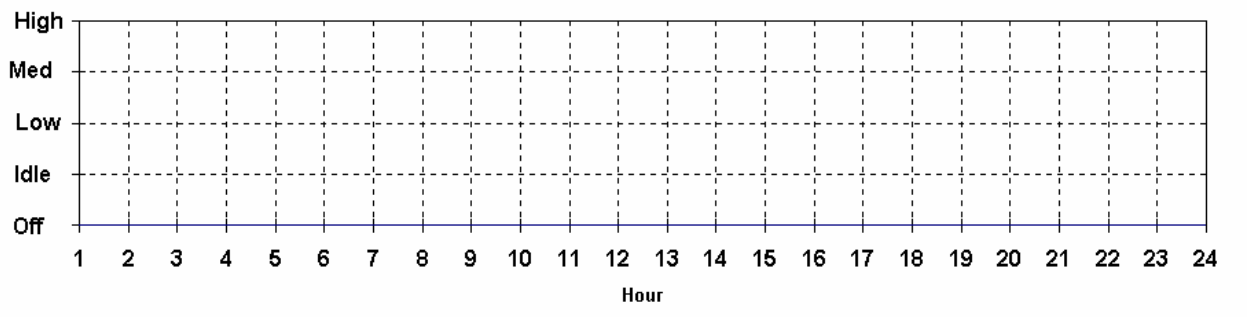
o **Building-Wide - or -**	**Area #___ and Area Name _____**
(fill out only one page)	(fill out one page per area)

Kitchen Operation

Q20. If the area has a commercial kitchen, draw a line that describes the schedule of use for ***kitchen equipment*** for a ***full operation day***.



Q21. If the area has a commercial kitchen, draw a line that describes the schedule of use for ***kitchen equipment*** for a ***light operation day***.



o **Building-Wide - or -** (fill out only one page)	**Area #___ and Area Name _____** (fill out one page per area)

Room Thermostat Setpoints

Q22. Enter the values for heating and cooling thermostat setpoints during normal (occupied) and setback (unoccupied) periods

Period	Heating Setpoint	Cooling Setpoint
Occupied		
Unoccupied		

Set CSP to 99 for "off," set the HSP to 45 for "off"

Q23. Are room temperatures in this area controlled by the building EMS? Y N DK

Q24. Does the setback schedule in this area follow the fan on/off schedule? Y N DK

If the answer is N or DK, define the setback schedule below:

Q25. Draw a line that defines the occupied and unoccupied mode for a ***full operation day***. DK

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Occupied																								
Unoccupied																								

Q26. Draw a line that defines the occupied and unoccupied mode for a ***light operation day***. DK

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Occupied																								
Unoccupied																								

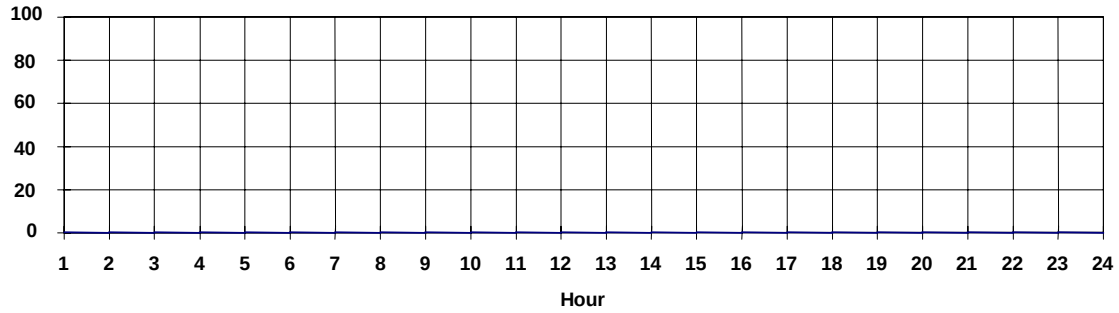
Q27. Draw a line that defines the occupied and unoccupied mode for a ***closed operation day***. DK

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Occupied																								
Unoccupied																								

Exterior Lighting

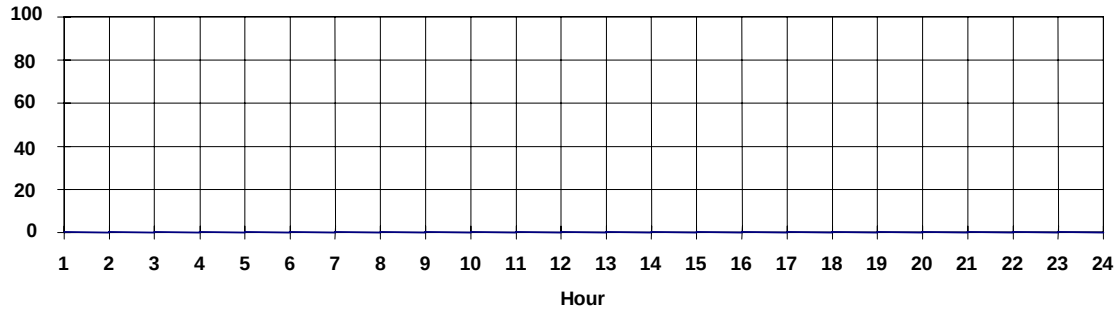
Q28. How are the exterior lights controlled? o Time clock o Photocell o DK

Q29. If the exterior lights are controlled with a time clock, draw a line that describes the schedule

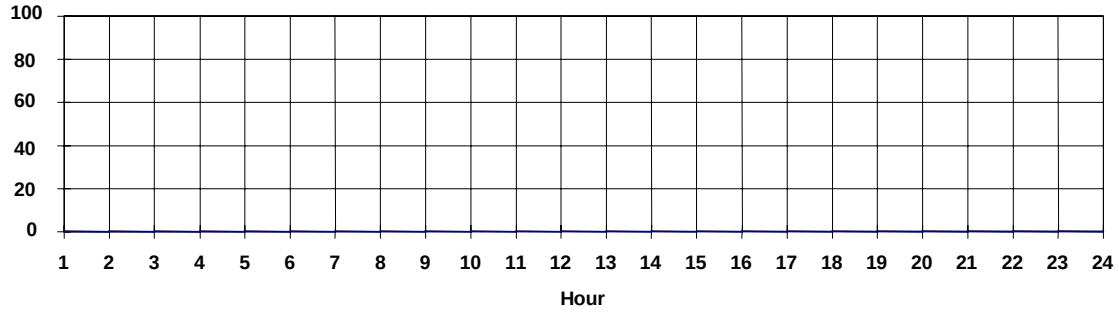


Exterior Miscellaneous Equipment

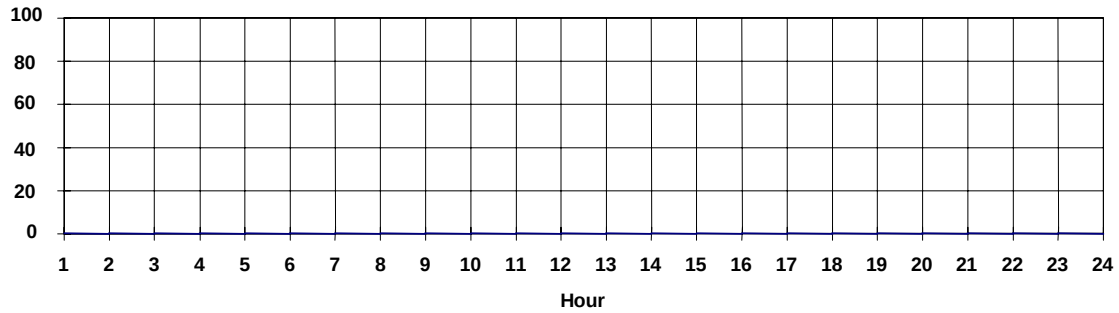
Q30. Provide a schedule for miscellaneous equipment ***not*** in the conditioned space for a ***full operation day***



Q31. Provide a schedule for miscellaneous equipment ***not*** in the conditioned space for a ***partial operation day***



Q32. Provide a schedule for miscellaneous equipment ***not*** in the conditioned space for a ***closed operation day***



Central HVAC Design and Control

The following questions will help us to understand how the HVAC systems operate in the building. (These questions are designed to be answered by someone familiar with the operation of the building mechanical and control systems.)

Q33. Does the building have a central energy management system (EMS)? Y N DK

In each question below, indicate if the control action specified is initiated by the central EMS.

Q34. What is the minimum cooling supply air temperature setpoint _____°F DK

Q35. How is the supply air temperature controlled? o EMS?

- o Fixed
- o Reset based on outside air temp
- o Reset based on zone temp
- o DK

Q36. What is the condenser water setpoint temperature? _____°F DK

Q37. How is the condenser water setpoint temperature controlled? o EMS?

- o Fixed
- o Reset based on outside temp
- o DK

Q38. If the system is VAV, how is the flow rate determined? o EMS?

- o Duct static pressure
- o Measured air flow at the zone VAV boxes
- o DK

Q39. Are CO_2 sensors used to control outdoor air quantities? Y N DK o EMS?

Q40. Is the heating system turned off (locked out) on a seasonal basis? Y N DK

Q41. If yes, indicate the months when the heating system is typically available:

J F M A M J J A S O N D DK

Q42. If the building has chillers and cooling towers, is the system equipped with a water-side economizer? Y N DK

Q43. If yes, what type of water-side economizer is used?

o Strainer cycle o Thermosyphon o Plate-frame heat exchanger o DK

Q44. Circle the months of the year when the water-side economizer system is typically used:

J F M A M J J A S O N D DK

HVAC Fan System Operation

This section is used to establish the fan system schedule. List the hours that the fans are "on" or "off." "On" indicates occupied mode, where the fans run continuously. "Off" indicates unoccupied mode, where the fans cycle on only if needed to satisfy space temperature needs, or are shut off regardless of space temperature..

Q45. Draw a line that describes the fan system operation for a ***full operation day***:

on																								
off																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Q46. Draw a line that describes the fan system operation for a ***light operation day***. DK

on																								
off																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Q47. Draw a line that describes the fan system operation for a ***closed operation day***. DK

on																								
off																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Q48. Is the fan system described above controlled by the building EMS? Y N DK

Q49. Is the fan system described above controlled using an optimum start algorithm? Y N DK

Note: For fans with optimal start/stop, indicate the building occupancy schedule - e.g. the time when the building needs to be at normal operating temperature.

List all air handling units, building areas, and/or packaged HVAC systems that run on this schedule below:

Shades and Blinds

Q50. If there are shades or blinds on windows, which ***best*** describes their general use?

o Always open
o Always closed
o Operated by occupants to control comfort
o Open when space is occupied, closed otherwise

Building-Wide Power Generation

Q51. Do you have an emergency back-up generator or cogeneration system? Y N DK

If yes, fill out the supplemental onsite power form

Thermal Energy Storage

Q52. Does the building have a thermal energy storage (TES) system? Y N DK

If yes, fill out the supplemental TES form.

Operations and Maintenance

Q53. Please list any equipment or system operating problems that cause thermal discomfort or excessive energy consumption?

Problem	**Equipment and/or Systems Affected**
System under or oversized	
Insufficient or excess air flow	
Faulty control sensors	
Improper control sensor installation or location	
Insufficient sensor points for control and/or monitoring	
Improper EMS or control system programming	
Control systems “locked out” (left in manual position)	
Faulty valve or damper linkage or actuator	
Loose fan belts and / or improper alignment	
Improper ductwork installation or leakage	
Leaky valves, pipes, or fittings	
Defective major components (compressors, pumps, fans, etc.)	
Refrigerant leakage	
Fouled evaporative cooler media	
Water treatment problems (corrosion or bacterial growth)	

Other (list)

Code	Equipment/system
1	Air distribution
2	Boiler
3	Chilled water
4	Chillers
5	Condenser water

Code	Equipment/system
6	Cooling towers
7	Daylight control(s)
8	Fans
9	Hot water
10	HVAC

Code	Equipment/system
11	Lighting
12	Occupancy sensor(s)
13	VSDs
14	Other

Built-Up HVAC Systems

(Do not enter backup or stand-by equipment)

Chillers/ Large Split DX

o Serves more than the surveyed area

	CH-	CH-	CH-
Equipment Name			
Location			
Quantity			
Manufacturer			
Model Number			
Serial Number			
Size (tons)			
Chiller Type	recip / screw / cent / absorp / gas eng	recip / screw / cent / absorp / gas eng	recip / screw / cent / absorp / gas eng
Full-load efficiency (kW/ton)			
Condenser Type	Air / Water	Air / Water	Air / Water
Air-Cooled Cond. Fan hp			

Enter condenser fan hp only if not included in equipment efficiency rating

Towers/ Evaporative Condensers

	T-	T-	T-
Equipment Name			
Location			
Quantity			
Manufacturer			
Model Number			
Rated Capacity (kBtuh)			
Out WB Temp @ rating			
Lv Cond Temp @ rating			
Fan Control	1-Sp / 2-Sp / Pony / VSD	1-Sp / 2-Sp / Pony / VSD	1-Sp / 2-Sp / Pony / VSD
Large Fan hp			
Large Fan motor efficiency			
Small fan hp			
Small fan motor efficiency			
Spray Pump hp			
Spray Pump motor effic.			

If one fan motor per tower or cell, enter size and efficiency under "Large fan." If two motors, indicate size and efficiency of both motors.

Built-Up HVAC Systems (cont.) (Do not enter backup or stand-by equipment)

Heating System

	HS-	HS-	HS-
Equipment Name			
Location			
Quantity			
Capacity	KW / kBtuh	KW / kBtuh	KW / kBtuh
Type	Steam / HW / Duct Htr	Steam / HW / Duct Htr	Steam / HW / Duct Htr
Fuel	Electric / Other	Electric / Other	Electric / Other

Pumps

Pump	**Name**	**Old Const?**	**HP**	Motor effic %	**M?**	**Control**	**M?**	**EMS?**	**Location**	**Loop**	**Use**
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec
P-		o			o	CV / VSD	o	o		CHW / Cond / HW	Pri / Sec

Built-Up HVAC Systems (cont.) (Do not enter backup or stand-by equipment)

Central Air Handlers

Name	AH-	AH-	AH-
Equipment Name			
Location			
Quantity			
Type (circle one)	Single Duct Dual Duct Multi-Zone	Single Duct Dual Duct Multi-Zone	Single Duct Dual Duct Multi-Zone
Evaporative System Type (circle one)	None / Direct Ind / Ind-Dir	None / Direct Ind / Ind-Dir	None / Direct Ind / Ind-Dir
Supply Fan Type (circle one)	CV / VAV	CV / VAV	CV / VAV
Supply Fan Control (if VAV - circle one)	VSD / Discharge oM? Inlet Vane	VSD / Discharge oM? Inlet Vane	VSD / Discharge oM? Inlet Vane
EMS control of supply fan?	O	O	O
Supply Fan Flow Rate (cfm)			
Supply Fan Motor HP			
motor efficiency			
Return/ Relief Fan HP			
motor efficiency			
OA Control (circle one)	Fixed / Temp / Enthal	Fixed / Temp / Enthal	Fixed / Temp / Enthal
EMS control of OA?	O	O	O
Min OA Fraction			

Packaged HVAC Systems

	AC-	AC-	AC-
Equipment Name			
Location			
Quantity			
Type Code			
Manufacturer			
Model No. (outdoor - all)			
Model No (indoor if split)			
Cooling Capacity (ton)			
Cooling Efficiency (circle units)	EER SEER	EER SEER	EER SEER
Supply CFM			
Heating Fuel (circle one)	Elec / Other	Elec / Other	Elec / Other
Heating Capacity (kBtuh) (heating capacity for heat pumps is for compressor only)			
Heating Efficiency (circle COP or HSPF for heat pumps, AFUE for gas heat)	COP HSPF AFUE	COP HSPF AFUE	COP HSPF AFUE
Condenser Type (circle one)	Dry Coil / Evap. Cond.? Pad pre-cooler	Dry Coil / Evap. Cond.? Pad pre-cooler	Dry Coil / Evap. Cond. Pad pre-cooler
Evaporative System Type (circle one)	None / Direct Ind / Ind-Dir	None / Direct Ind / Ind-Dir	None / Direct Ind / Ind-Dir
System Type (circle one)	CV / VAV	CV / VAV	CV / VAV
Supply Fan Control (if VAV, circle one)	VSD / Discharge Inlet Vane	VSD / Discharge Inlet Vane	VSD / Discharge Inlet Vane
EMS control of Supply Fan?	O	O	O
Supply Fan HP			
Return/Relief Fan HP			
OA Control	Fixed / Temp? Enthal	Fixed / Temp? Enthal	Fixed / Temp Enthal
EMS control of OA?	O	O	O
Min OA Fraction			

Type Code	Description	Type Code	Description	Type Code	Description
1	Single Package Rooftop AC	5	PTAC	9	Water Loop Heat Pump
2	Single Package Rooftop Heat Pump	6	PTHP	10	Dual Fuel Heat Pump
3	Split System AC	7	Window/Wall AC Unit	11	Evaporative System
4	Split System Heat Pump	8	Window/Wall HP		

Ducts Outside Conditioned Space

System	Type	Location	Dia or L x W (in)	Lineal Ft	Construction	R-Value	Notes
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		
	o Supply o Return	o Plenum o Outside o Uncond.			o Sheet Metal o Flex o Duct Board		

Note variance from plans and as-built

Zone _____

Name _____ Zone Multiplier _____ HVAC zoning by exposure? Y N

Exterior Walls

Assembly Name	**Type Code**	Insul R or U-value	HC	**Orientation** (N, NE, E, ,NW)	**H (ft)**	**W (ft)**
		R U				
		R U				
		R U				
		R U				
		R U				
		R U				
		R U				
		R U				
		R U				

Height and width are gross dimensions, including windows
Enter "0" for R-value if uninsulated, leave blank if unknown

	Wall Construction Type
1	Face Brick + Brick
2	Face Brick + Poured Concrete
3	Face Brick + Concrete Block

	Wall Construction Type
4	Poured Concrete + Finish
5	Concrete Block + Finish
6	Wood Frame Wall

	Wall Construction Type
7	Metal Frame Wall
8	Curtain Wall
9	Open

Roof

Assembly Name	**Type Code**	**Surf Code**	**Surf Color**	**Ceil Insul**	**Roof Insul**	**L (ft)**	**W (ft)**	Tilt (deg)	Orient (deg)	Plen H (ft)	Plen Wall R	Ret Air
				R U	R U							o
												o
												o
												o

Height and width are gross dimensions, including skylights
Enter "0" for R-value if uninsulated, leave blank if unknown
Tit = 0 for horizontal, Orient = 0 for North

	Roof Type
10	Concrete Deck Roof.
11	Wood Frame Roof
12	Metal Frame Roof

	Roof Surface		
1	Paint	4	Metal roofing
2	Elastomeric coating	5	Asphalt shingles or roll
3	Single ply membrane	6	Gravel (ballast)

	Color				
1	White	4	Grey	7	Med Brn
2	Silver	5	Green	8	Dk Brn
3	Lt grey	6	Lt Brn	9	Black

Zone _____ (contd)

Window/Skylight Types

Ref. No.	Assembly Name	**No. Panes**	**Glazing Type**	**Frame Type**	**Features (circle)**	**Meas.Trans.**	SHGC	U- value
1					Low e / gas fill			
2					Low e / gas fill			
3					Low e / gas fill			
4					Low e / gas fill			
5					Low e / gas fill			
6					Low e / gas fill			
7					Low e / gas fill			
8					Low e / gas fill			
9					Low e / gas fill			
10					Low e / gas fill			

	Glass Type
1	Clear
2	Tinted
3	Reflective
4	Fritted (diffusing)

	Plastic Type
5	Clear Plastic
6	Tinted Plastic
7	White Plastic
8	Translucent

	Window Frame Type
1	Standard Metal Frame
2	Thermally Broken Frame
3	Wood/Vinyl Frame

	Skylight Frame Type
4	Standard Metal Frame w/ Curb
5	Thermally Broken Frame w/ Curb
6	Standard Metal Frame w/o Curb
7	Thermally Broken Frame w/o Curb

Window/Skylight Geometry

Ref No.	**Tilt**	**Orient**	**H (ft)**	**W (ft)**	**Qty**	Int. Shade Type	Otr Ex Shd%	OH Offset	OH Proj	Side Fin Ofst	Side Fin Proj	**Skylite Shape**	**Oper?**
													Y/ N
													Y/ N
													Y/ N
													Y/ N
													Y/ N
													Y/ N
													Y/ N
													Y/ N
													Y/ N
													Y/ N
													Y/ N

Tit = 0 for horizontal, Orient = 0 for North. Tilt applies only to skylights. Side fins apply only to windows.
Otr Ex Shd% refers to exterior shading from adjacent buildings, building self-shading, thick vegetation, hillsides etc.
Interior Shade Type: 1 = Blinds; 2 = Light Shades or Drapes; 3 = Dark Shades or Drapes

Skylight Shape: 1 = Domed; 2= Flat; 3= Pyramid; 4= Ridge; 5= Vault

Zone _____ (contd)

Zone-Level HVAC Equipment (Not Central, Not Packaged)

Name	**Type Code**	**Quantity**	Fan Hp	CFM	**Heat Source**	kW (If elec. heat)
					None / Elec. / Other	
					None / Elec. / Other	
					None / Elec. / Other	
					None / Elec. / Other	
					None / Elec. / Other	
					None / Elec. / Other	
					None / Elec. / Other	
					None / Elec. / Other	

Zone-Level HVAC Equipment

Type Code	Zone-Level HVAC Equipment Description
1	Baseboard or radiant heater
2	Two-pipe fan coil
3	Four-pipe fan coil
4	Two pipe induction terminal
5	Four pipe induction terminal
6	Unit heater

Type Code	Zone-Level HVAC Equipment Description
7	Unit ventilator
8	Non-powered VAV terminal
9	Series fan-powered VAV terminal
10	Parallel fan-powered VAV terminal
11	Computer equipment cooler
12	Exhaust fan

Space _____

Name _____ Floor Area_____SF

Corridor/Restroom/Support Area_____% Space Multiplier_____

Circle appropriate occupancy code: LPD Measure o

1	Auditorium	14	Office - Other	26	Hotel function	39	Gymnasium
2	Church /chapel	15	Computer center	27	Hotel guest room	40	Library
3	Convention, meeting	16	EEG/EKG/MRI/Radiation	28	Hotel lobby	41	Locker room
4	Courtroom	17	Hospital - Emergency	29	Barber, beauty shop	42	School shop
5	Exhibit	18	General hospital area	30	Bowling alley	43	Swimming pool
6	Main entry lobby	19	Hospital laboratory	31	Coin op laundry	44	Aircraft hanger
7	Motion picture theater	20	Patient room/ nursery	32	Comm'l dry cleaners	45	Auto repair workshop
8	Performance theater	21	Therapy (OT, PT)	33	Grocery	46	General C&I work
9	Bars, lounge, casino	22	Pharmacy	34	Mall, arcade, atrium	47	Precision C&I work
10	Dining	23	Radiology	35	Retail, whlse sales flr	48	Storage, warehouse
11	Kitchen	24	Recovery	36	Classroom	49	Other (Describe)
12	Bank/financial institution	25	Surgical & OB suite	37	Day care		
13	Medical / clinical office			38	Dormitory		

Lighting

Name	**Fixture Code**	**Fixture Count**	Fixture type	**Controls** (circle all that apply)		**% fix ctrl**	**% ctrl oper**
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		
			Rec / Dir / Ind / Ind-Dir / Task	1 / 2 / 3 / 4	o EMS?		

Define lighting not included in LPD as task lighting - includes portable task lights, display case lighting, medical examination lighting.
Lighting Control Codes
1 = Occupancy sensor 2 = Daylight - contin. dimming 3 = Daylighting - stepped 4 = Lumen maintenance

Miscellaneous Equipment and Plug Loads

o Use typical value: 1 2 3 4 o Define additional or unique loads (use next page)

Space _____ contd

Miscellaneous Equipment and Plug Loads

o Use typical value: 1 2 3 4 plus additional loads listed below:

o Define unique loads for this space only

Name	**Equip. Code**	**Count**	kW/ Unit or	Motor HP or	kBtuh Input	Under Hood?
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N

Equipment - Record kW for equipment without default or if default is not appropriate

	Equipment Description	Equip Code	Default kW
General	Personal Computer w/ Monitor	1	0.5
	Terminal	2	0.15
	Laser Printer	3	0.85
	Copier	4	1.4
	Fax Machine	5	0.1
	Mini-Computer + Periph	6	1.0
	Main Frame Computer + Periph	7	
	Microwave	8	1.7
	Misc. Appliance	9	
	Television	10	0.15
	Washer	11	0.5
	Dryer	12	4.
	Cash Register	13	0.15
	Box Crusher	14	10.
	Gasoline pump	15	0.7
	ATM	16	.5
	Video game	17	.5
	Exercise equipment	18	.5

	Equipment Description	Equip Code	Default kW
Grocery	Meat Grinder	19	7.
	Meat Saw	20	2.5
	Meat Slicer	21	0.25
	Wrapper	22	0.9
	Check stand	23	1.5
Hospital	Laboratory Equipment	24	
	Monitoring, Life Support	25	1.1
	EEG	26	1.1
	EKG	27	1.1
	MRI	30	26.
	X-ray machine	31	5.
	Radiation Therapy Machine	32	10.
Indust	Air Compressor	33	
	Welder	34	
	Battery Charger	35	1.5
	Machine Tools	36	
	Motor	37	
Misc.	Other	38	

Typical Miscellaneous Equipment and Plug Loads 1 2 3 4

Floor area surveyed _____ SF

Name	**Equip. Code**	**Count**	kW/ Unit or	Motor HP or	kBtuh Input	Under Hood?
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N
						Y / N

Equipment - Record kW for equipment without default or if default is not appropriate

	Equipment Description	Equip Code	Default kW
General	Personal Computer w/ Monitor	1	0.5
	Terminal	2	0.15
	Laser Printer	3	0.85
	Copier	4	1.4
	Fax Machine	5	0.1
	Mini-Computer + Periph	6	1.0
	Main Frame Computer + Periph	7	
	Microwave	8	1.7
	Misc. Appliance	9	
	Television	10	0.15
	Washer	11	0.5
	Dryer	12	4.
	Cash Register	13	0.15
	Box Crusher	14	10.
	Gasoline pump	15	0.7
	ATM	16	.5
	Video game	17	.5
	Exercise equipment	18	.5

	Equipment Description	Equip Code	Default kW
Grocery	Meat Grinder	19	7.
	Meat Saw	20	2.5
	Meat Slicer	21	0.25
	Wrapper	22	0.9
	Check stand	23	1.5
Hospital	Laboratory Equipment	24	
	Monitoring, Life Support	25	1.1
	EEG	26	1.1
	EKG	27	1.1
	MRI	30	26.
	X-ray machine	31	5.
	Radiation Therapy Machine	32	10.
Indust	Air Compressor	33	
	Welder	34	
	Battery Charger	35	1.5
	Machine Tools	36	
	Motor	37	
Misc.	Other	38	

Hot Water

Conventional Water Heating Equipment

Name	**Location**	**Type Code**	**Old Cost ?**	Storage Cap (gal)	**Fuel**	Pump hp	M?
			o		Elec / Other		o
			o		Elec / Other		o
			o		Elec / Other		o
			o		Elec / Other		o

Solar Water Heating Equipment

Name	Location	System Type Code	Collector Area (SF)	Tilt (deg, horiz =0)	Storage Cap (gal)	M?
						o
						o
						o

WH Type Code	Water Heater Description
1	Storage
2	Instantaneous
3	Heat Pump

SWH Type Code	Solar Water Heater Description
1	Active flat plate
2	Passive flat plate
3	Integral Collector/Storage
4	Active evacuated tube
5	Active concentrating E-W tracking
6	Active concentrating N-S tracking

Miscellaneous

Interior Transformers

Name	**Location**	**Qty**	Manuf.	Model No.	**kVA**	**Temp Rise (°C)**	**Cooling Fan?**
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N
							Y / N

Verify for participants receiving incentive only

Vertical Transportation

				Elevator		Escalator	
Name	**Type**	**Qty**	Motor hp	**Number of Floors**	**Width (ft)**	**Rise (ft)**	**Run (ft)**
	Elev / Esc						
	Elev / Esc						
	Elev / Esc						
	Elev / Esc						
	Elev / Esc						
	Elev / Esc						

Exterior Lighting

Name	**Fixture Code**	**Count**

Collect only if connected to electric meter serving occupied space

Miscellaneous Exterior Electric Loads

Name	**Equip Code**	**Quantity**	kW/unit or	Hp/unit

Collect only if connected to electric meter serving occupied space

Equipment Description	Equipment Code	Default kW
Misc. Appliance	1	
Washer	2	0.5
Dryer	3	4.
Cash Register	4	0.15
Box Crusher	5	10.
Gasoline pump	6	0.7
Air Compressor	7	

Equipment Description	Equipment Code	Default kW
Welder	8	
Battery Charger	9	1.5
Machine Tools	10	
Motor	11	
Refrig vending machine	12	
Ice merchandizer	13	
Other	14	

Meters

Meter Number	Surveyed Space kWh / Metered Space kWh (%)	Meter Location

o Some or all meter information not available

Notes:

System / Zone Association Checklist

DOE-2 "Virtual" System ----→	1	2	3	4	5	6	7	8	9	Zonal HVAC only	Uncond
Packaged HVAC											
AC-1											
AC-2											
AC-3											
AC-4											
AC-5											
AC-6											
AC-7											
AC-8											
AC-9											
AC-10											
AC-11											
AC-12											
AC-13											
AC-14											
AC-15											
AC-16											
AC-17											
AC-18											
AC-19											
AC-20											
Air Handlers											
AH-1											
AH-2											
AH-3											
AH-4											
AH-5											
AH-6											
AH-7											
AH-8											
AH-9											
AH-10											
AH-11											
AH-12											
AH-13											
AH-14											
AH-15											
AH-16											
AH-17											
AH-18											
AH-19											
AH-20											
Zone 1											
Zone 2											
Zone 3											
Zone 4											
Zone 5											
Zone 6											
Zone 7											
Zone 8											
Zone 9											
Zone 10											

Check 'Zonal HVAC only' if zone is conditioned only by baseboard, radiant, or unit heaters, or unit ventilators.

Plant / System Association Checklist

DOE-2 "Virtual" System ----→	1	2	3	4	5	6	7	8	9
Chillers / AC Compressors									
CH-1									
CH-2									
CH-3									
CH-4									
CH-5									
CH-6									
CH-7									
CH-8									
CH-9									
CH-10									
Towers / Evap. Condensers									
T-1									
T-2									
T-3									
T-4									
T-5									
T-6									
T-7									
T-8									
T-9									
T-10									
Heating Systems									
HS-1									
HS-2									
HS-3									
HS-4									
HS-5									
HS-6									
HS-7									
HS-8									
HS-9									
HS-10									
Pumps									
P-1									
P-2									
P-3									
P-4									
P-5									
P-6									
P-7									
P-8									
P-9									
P-10									
P-11									
P-12									
P-13									
P-14									
P-15									
P-16									
P-17									
P-18									
P-19									
P-20									

Interview "Area" / Audit "Zone" Association Checklist

Areas	1	2	3	4	5
Zone 1					
Zone 2					
Zone 3					
Zone 4					
Zone 5					
Zone 6					
Zone 7					
Zone 8					
Zone 9					
Zone 10					

Space/Zone Association

	Zone									
Space	Z 1	Z 2	Z 3	Z 4	Z 5	Z 6	Z 7	Z 8	Z 9	Z 10
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
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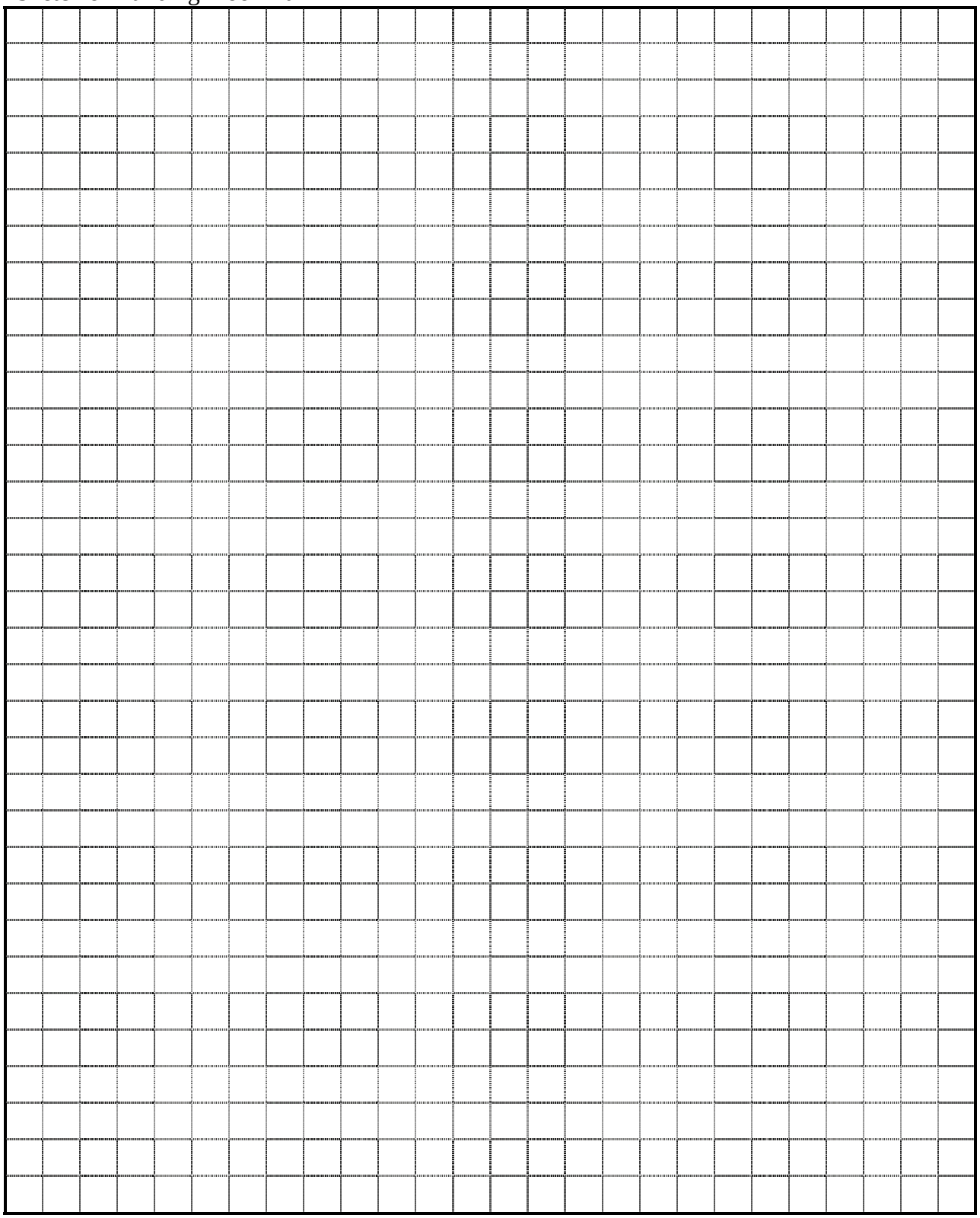
25										
26										
27										
28										
29										
30										

Sketch of Building Floor Plan



Be sure to include dimensions, North arrow, and zone and HVAC equipment locations

Appendix E: Facility Wide Savings for HVAC Tuneup Measure

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
110	0.0%	HP	BARD	37WH7-AO5C	36,000	storage	1886	575	1,726	$98	$318	3.2
1277	100.0%	HP	CARRIER	50HJQ014 500QA	140,000	shop/Lab	1602	574	6,699	$382	$318	0.8
1277	100.0%	HP	CARRIER	50HX-060-501AA	57,500	shop/Lab	1602	574	2,751	$157	$318	2.0
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
1402	0.0%	HP	WESTINGHOUSE	UBO22KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1402	0.0%	R	WESTINGHOUSE		60,000	Office - Trailer	1735	476	2,380	$136	$318	2.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
1404	0.0%	R	CARRIER	50DD016400	150,000	Office - Trailer	1735	476	5,949	$339	$318	0.9
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	512	1,280	$73	$318	4.4
1405	83.3%	HP	UNKNOWN		36,000	Office - Trailer	1735	512	1,537	$88	$318	3.6
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	512	982	$56	$318	5.7
1405	83.3%	R	CARRIER	40RR012550	120,000	Office - Trailer	1735	447	4,468	$255	$318	1.2
1405	83.3%	R	TRANE	BU-7A	36,000	Office - Trailer	1735	447	1,340	$76	$318	4.2
1405	83.3%	R	TRANE	SAHE-B756-AA	60,000	Office - Trailer	1735	447	2,234	$127	$318	2.5
1405	83.3%	R	TRANE	SAHE-B756-AA	60,000	Office - Trailer	1735	447	2,234	$127	$318	2.5
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1406	100.0%	HP	TRANE	WCC036F100BE	36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	479	918	$52	$318	6.1
1408	100.0%	HP	MARVAIR	AVP20HPA04N-1000 BI 06883	20,000	Food	4128	265	441	$25	$318	12.7
1408	100.0%	R	BARD	24WA	24,000	Food	4128	242	484	$28	$318	11.5
1413	100.0%	HP	MARVAIR	AVP36HHPA10N	35,200	Communications /computer	5976	879	2,578	$147	$318	2.2
1413	100.0%	HP	MARVAIR	AVP36HPA10N	35,200	Communications /computer	5976	879	2,578	$147	$318	2.2
1456	33.3%	HP	TEMPSTAR	NPHAD36N1K4	36,000	Office - Trailer	1735	611	1,833	$105	$318	3.0
1456	33.3%	HP	TEMPSTAR	PHF024K000A	24,000	Office - Trailer	1735	611	1,222	$70	$318	4.6
1456	33.3%	HP	TEMPSTAR	PHF024K000A	24,000	Office - Trailer	1735	611	1,222	$70	$318	4.6
1456	33.3%	HP	TEMPSTAR	PHF030K000A	30,000	Office - Trailer	1735	611	1,528	$87	$318	3.7
1456	33.3%	HP	TEMPSTAR	PHF030K000A	30,000	Office - Trailer	1735	611	1,528	$87	$318	3.7
1456	33.3%	R	BDP-PAYNE	5590024PAC	24,000	Office - Trailer	1735	464	929	$53	$318	6.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
1492	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	476	1,190	$68	$318	4.7
1492	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	476	1,190	$68	$318	4.7
1526	100.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	441	1,323	$75	$318	4.2
1526	100.0%	R	UNKNOWN	36WA1	36,000	Office - Trailer	1735	441	1,323	$75	$318	4.2
1527	100.0%	R	BARD	18WA	17,500	Office - Trailer	1735	441	643	$37	$318	8.7
1527	100.0%	R	BARD	24WA	23,000	Office - Trailer	1735	441	845	$48	$318	6.6
1527	100.0%	R	BARD	24WA	23,000	Office - Trailer	1735	441	845	$48	$318	6.6
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	441	1,103	$63	$318	5.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	441	1,103	$63	$318	5.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	441	1,103	$63	$318	5.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	441	1,103	$63	$318	5.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	441	1,103	$63	$318	5.1
1527	100.0%	R	BARD	WA182A10XX4	18,300	Office - Trailer	1735	441	673	$38	$318	8.3
1527	100.0%	R	BARD	WA241A10XX4	24,000	Office - Trailer	1735	441	882	$50	$318	6.3
1527	100.0%	R	BARD	WA241A10XX4	24,000	Office - Trailer	1735	441	882	$50	$318	6.3
1527	100.0%	R	BARD	WA301A10	31,000	Office - Trailer	1735	441	1,139	$65	$318	4.9
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	441	1,139	$65	$318	4.9
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	441	1,139	$65	$318	4.9
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	441	1,139	$65	$318	4.9
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	441	1,139	$65	$318	4.9
1541	0.0%	HP	BARD	WH301A05XX4	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
1541	0.0%	HP	BARD	WH301A05XX4	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
1541	0.0%	HP	BARD	WH301A05XX4	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
1578	0.0%	HP	BARD	24WH2	22,600	Office - Trailer	1735	677	1,275	$73	$318	4.4
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	677	1,997	$114	$318	2.8
1579	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1579	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1601	0.0%	R	BARD	36WA1	36,000	Office - Modular	3725	294	882	$50	$318	6.3
1601	0.0%	R	BARD	36WA1	36,000	Office - Modular	3725	294	882	$50	$318	6.3
1601	0.0%	R	BARD	36WA1	36,000	Office - Modular	3725	294	882	$50	$318	6.3
1601	0.0%	R	BARD	WA361B09XX4XXX	36,000	Office - Modular	3725	294	882	$50	$318	6.3
1602	0.0%	R	BARD	36WA3	36,000	storage	1886	412	1,236	$70	$318	4.5
1602	0.0%	R	BARD	36WA3	36,000	storage	1886	412	1,236	$70	$318	4.5
1602	0.0%	R	BARD	36WA3	36,000	storage	1886	412	1,236	$70	$318	4.5
1632	100.0%	HP	MARVAIR	AVP48HPA10CS	47,000	Office - Trailer	1735	479	1,877	$107	$318	3.0
1632	100.0%	HP	MARVAIR	AVP48HPA10CS	47,000	Office - Trailer	1735	479	1,877	$107	$318	3.0
1632	100.0%	HP	MARVAIR	AVP48HPA10CS	47,000	Office - Trailer	1735	479	1,877	$107	$318	3.0
1632	100.0%	HP	MARVAIR	AVP48HPA10CSH93CI	47,000	Office - Trailer	1735	479	1,877	$107	$318	3.0
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F400F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F400F0	90,000	Office - Modular	3725	431	3,229	$184	$318	1.7
1677	0.0%	HP	TRANE	BWC060C400G1	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1677	0.0%	HP	TRANE	BWC060C400G1	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
1677	0.0%	HP	TRANE	BWC060C400G1	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
1680	100.0%	R	WALL-KING	PWY036CAVAA05	35,200	Office - Modular	3725	231	677	$39	$318	8.2
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	231	677	$39	$318	8.2
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	231	677	$39	$318	8.2
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	231	677	$39	$318	8.2
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	231	677	$39	$318	8.2
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	231	677	$39	$318	8.2
1713	100.0%	R	MARVAIR	AVP24ACA/10MO/C89B1	24,000	Locker/Exercise	2701	339	677	$39	$318	8.2
1714	100.0%	HP	BARD	WH182A04XX4XXX	19,000	Locker/Exercise	2701	400	633	$36	$318	8.8
1726	66.7%	HP	BARD	WH361B09XX4XXX	35,600	Office - Modular	3725	366	1,086	$62	$318	5.1
1726	66.7%	HP	MARVAIR	AVP36HPC09N1000BI06911	35,691	Office - Modular	3725	366	1,089	$62	$318	5.1
1726	66.7%	R	BARD	36WA3	36,000	Office - Modular	3725	252	756	$43	$318	7.4
1726	66.7%	R	BARD	36WA6B09C	36,000	Office - Modular	3725	252	756	$43	$318	7.4
1727	100.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1727	100.0%	HP	BARD	WH241A04XX4XXXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1727	100.0%	HP	BARD	WH241A04XX4XXXX	23,600	Office - Trailer	1735	479	942	$54	$318	5.9
1727	100.0%	HP	MARVAIR	AVP24HPA05N1000	22,600	Office - Trailer	1735	479	902	$51	$318	6.2
1727	100.0%	HP	MARVAIR	AVP24HPA05N1000	22,600	Office - Trailer	1735	479	902	$51	$318	6.2
1727	100.0%	HP	RHEEM		36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
1727	100.0%	HP	RHEEM	RPNA038C000	38,500	Office - Trailer	1735	479	1,537	$88	$318	3.6
1727	100.0%	R	BARD	24WA	23,000	Office - Trailer	1735	441	845	$48	$318	6.6
1730	100.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	441	1,286	$73	$318	4.3

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1730	100.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	441	1,286	$73	$318	4.3
1730	100.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	441	1,286	$73	$318	4.3
1735	0.0%	HP	GENERAL ELECTRIC	BWC042C300DI	43,000	Office - Trailer	1735	677	2,426	$138	$318	2.3
1735	0.0%	HP	GENERAL ELECTRIC	BWC042C300DI	43,000	Office - Trailer	1735	677	2,426	$138	$318	2.3
1735	0.0%	HP	GENERAL ELECTRIC	BWC048C300DI	48,500	Office - Trailer	1735	677	2,737	$156	$318	2.0
1736	0.0%	HP	TEMPSTAR	PHF048L000A	48,000	Office - Modular	3725	431	1,722	$98	$318	3.2
1736	0.0%	HP	TEMPSTAR	PHF048L000A	48,000	Office - Modular	3725	431	1,722	$98	$318	3.2
1736	0.0%	HP	TEMPSTAR	PHF048L000A	48,000	Office - Modular	3725	431	1,722	$98	$318	3.2
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	431	1,256	$72	$318	4.4
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	431	1,256	$72	$318	4.4
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	431	1,256	$72	$318	4.4
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	431	1,256	$72	$318	4.4
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	431	1,256	$72	$318	4.4
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	431	1,256	$72	$318	4.4
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	431	1,256	$72	$318	4.4
1802	0.0%	HP	UNKNOWN		18,000	Locker/Exercise	2701	400	600	$34	$318	9.3
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	467	1,402	$80	$318	4.0
1879	80.0%	HP	BARD	36WH2	35,400	classroom/conference	2627	242	713	$41	$318	7.8
1879	80.0%	HP	BARD	GH481-B09EPXDXX		classroom/conference	2627	242	0	$0	$0	
1879	80.0%	HP	BARD	QH481-B09EPXDXX		classroom/conference	2627	242	0	$0	$0	
1879	80.0%	HP	BARD	WH421B09XX4XXX	41,500	classroom/conference	2627	242	836	$48	$318	6.7
1879	80.0%	HP	TRANE	WSC048A3R0A01000 000000000A	48,000	classroom/conference	2627	242	967	$55	$318	5.8
1879	80.0%	HP	TRANE	WSC048A3R0A03000 000000000A	48,000	classroom/conference	2627	242	967	$55	$318	5.8
1879	80.0%	HP	TRANE	WSC048A3R0A0D00 0000000000A	48,000	classroom/conference	2627	242	967	$55	$318	5.8
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	479	1,398	$80	$318	4.0
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	479	1,398	$80	$318	4.0
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	479	1,398	$80	$318	4.0

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	479	1,398	$80	$318	4.0
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
1885	75.0%	HP	MARVAIR	AVP38HPA-05NF-H87AO	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
1885	75.0%	HP	MARVAIR	AVP38HPA-05NF-H87AO	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
1886	0.0%	HP	BARD	36WH6	35,000	shop/Lab	1602	703	2,051	$117	$318	2.7
1886	0.0%	HP	BARD	MHP36AA050	33,600	shop/Lab	1602	703	1,969	$112	$318	2.8
1886	0.0%	HP	BARD	MHP36AA05C	33,600	shop/Lab	1602	703	1,969	$112	$318	2.8
1886	0.0%	HP	BARD	MHP36AA05C	33,600	shop/Lab	1602	703	1,969	$112	$318	2.8
1887	100.0%	HP	CARRIER	50QQ036540	34,800	Office - Trailer	1735	479	1,390	$79	$318	4.0
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1887	100.0%	HP	MARVAIR	HFAFNE	18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	479	1,446	$82	$318	3.9
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	479	1,677	$96	$318	3.3

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	479	1,677	$96	$318	3.3
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	479	1,677	$96	$318	3.3
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	479	1,677	$96	$318	3.3
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	479	1,677	$96	$318	3.3
1888	100.0%	HP	RHEEM	RPNC058J000	56,000	Office - Trailer	1735	479	2,236	$127	$318	2.5
1888	100.0%	HP	RHEEM	RPNC058J000	56,000	Office - Trailer	1735	479	2,236	$127	$318	2.5
1888	100.0%	HP	RHEEM	RPNC058J000	56,000	Office - Trailer	1735	479	2,236	$127	$318	2.5
1888	100.0%	HP	RHEEM	RPND018J	18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1888	100.0%	HP	RHEEM	RPND018J000	18,000	Office - Trailer	1735	479	719	$41	$318	7.8
1888	100.0%	HP	RHEEM	RPND030J000	30,200	Office - Trailer	1735	479	1,206	$69	$318	4.6
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	479	1,637	$93	$318	3.4
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	479	1,637	$93	$318	3.4
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	479	1,637	$93	$318	3.4
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	479	1,637	$93	$318	3.4
1889	100.0%	HP	CARRIER	50NQO42310	41,000	Office - Trailer	1735	479	1,637	$93	$318	3.4
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANO48	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANO48	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANO48	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANO60	58,500	Office - Trailer	1735	479	2,336	$133	$318	2.4
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEG	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEG	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEG	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEQ	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	65AN048	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	65AN048	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	65ANO48	48,000	Office - Trailer	1735	479	1,917	$109	$318	2.9
1925	100.0%	HP	TEMPSTAR	PHAD60N1K3	57,000	Office - Trailer	1735	479	2,276	$130	$318	2.5
1925	100.0%	R	INTERTHERM, INC	SUH36I79MY23T02	36,000	Office - Trailer	1735	441	1,323	$75	$318	4.2
1925	100.0%	R	INTERTHERM, INC	SUH36I79MY23T02	36,000	Office - Trailer	1735	441	1,323	$75	$318	4.2
1925	100.0%	R	INTERTHERM, INC	SUH36I79MY23T02	36,000	Office - Trailer	1735	441	1,323	$75	$318	4.2
1927	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
1927	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
1927	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
194A	0.0%	HP	TRANE	BWC030C100CA	30,200	shop/Lab	1602	703	1,770	$101	$318	3.2
211	100.0%	R	CARRIER	48SS024040321AA	24,000	Office - Modular	3725	231	462	$26	$318	12.1
211	100.0%	R	CARRIER	48SS036060531AA	36,000	Office - Modular	3725	231	693	$39	$318	8.1
211	100.0%	R	CARRIER	48SS036060531AA	36,000	Office - Modular	3725	231	693	$39	$318	8.1
211	100.0%	R	CARRIER	48SS042060531AA	42,500	Office - Modular	3725	231	818	$47	$318	6.8
211	100.0%	R	CARRIER	48SS042060531AA	42,500	Office - Modular	3725	231	818	$47	$318	6.8
211	100.0%	R	CARRIER	48SS048080541AA	47,000	Office - Modular	3725	231	904	$52	$318	6.2
211	100.0%	R	CARRIER	48SS048080541AA	47,000	Office - Modular	3725	231	904	$52	$318	6.2
211	100.0%	R	CARRIER	48SS048080541AA	47,000	Office - Modular	3725	231	904	$52	$318	6.2
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	231	1,145	$65	$318	4.9
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	231	1,145	$65	$318	4.9
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	231	1,145	$65	$318	4.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	231	1,145	$65	$318	4.9
2127	100.0%	HP	MARVAIR	AVP48HPA-10CS H93CI	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
2127	100.0%	HP	MARVAIR	AVP48HPA-10CS H93CI	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
2128	0.0%	R	INTERTHERM, INC	AWY036KCRAB10	35,000	Office - Modular	3725	294	857	$49	$318	6.5
2128	0.0%	R	INTERTHERM, INC	AWY036KCRAB10	35,000	Office - Modular	3725	294	857	$49	$318	6.5
2177	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
2177	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
2177	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
2180	0.0%	HP	INTERTHERM, INC	AWYB-024KB10-01	24,000	Office - Trailer	1735	677	1,354	$77	$318	4.1
2180	0.0%	R	MARVAIR		24,000	Office - Trailer	1735	476	952	$54	$318	5.9
2180	0.0%	R	MARVAIR		24,000	Office - Trailer	1735	476	952	$54	$318	5.9
2180	0.0%	R	MARVAIR		24,000	Office - Trailer	1735	476	952	$54	$318	5.9
2525	0.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	476	1,388	$79	$318	4.0
2525	0.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	476	1,388	$79	$318	4.0
2525	0.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	476	1,388	$79	$318	4.0
2554	0.0%	HP	BARD	30WH1	29,600	Office - Modular	3725	431	1,062	$61	$318	5.3
2580	0.0%	HP	CARRIER	50PQO12510AA	120,000	Communications /computer	5976	959	9,592	$547	$318	0.6
2580	0.0%	HP	CARRIER	50QOCO8510	90,000	Communications /computer	5976	959	7,194	$410	$318	0.8
2580	0.0%	HP	CARRIER	50YQO48410	48,000	Communications /computer	5976	959	3,837	$219	$318	1.5
2627	0.0%	R	BARD	24WA5	24,000	classroom/conference	2627	235	471	$27	$318	11.9
2627	0.0%	R	BARD	24WA5	24,000	classroom/conference	2627	235	471	$27	$318	11.9
2627	0.0%	R	MARVAIR	AVP24ACA-08NF-G86BO	24,000	classroom/conference	2627	235	471	$27	$318	11.9
2627	0.0%	R	MARVAIR	AVP24ACA-08NF-G86BO	24,000	classroom/conference	2627	235	471	$27	$318	11.9
2679	18.2%	HP	BARD	WH361-AOSXX4XXX	35,600	Office - Trailer	1735	641	1,902	$108	$318	2.9
2679	18.2%	HP	BARD	WH361-AOSXX4XXX	35,600	Office - Trailer	1735	641	1,902	$108	$318	2.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	641	1,881	$107	$318	3.0
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	641	1,881	$107	$318	3.0
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	641	1,881	$107	$318	3.0
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	641	1,881	$107	$318	3.0
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	641	1,881	$107	$318	3.0
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI06906	35,200	Office - Trailer	1735	641	1,881	$107	$318	3.0
2679	18.2%	HP	MARVAIR	AVP36HPAD5N1000BI	35,200	Office - Trailer	1735	641	1,881	$107	$318	3.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	470	1,409	$80	$318	4.0
2679	18.2%	R	GENERAL ELECTRIC	TC24FN51	24,000	Office - Trailer	1735	470	939	$54	$318	5.9
2684	37.5%	HP	BARD		24,000	Office - Trailer	1735	603	1,206	$69	$318	4.6
2684	37.5%	HP	BARD	WH316A10XX4	35,400	Office - Trailer	1735	603	1,778	$101	$318	3.1
2684	37.5%	HP	MARVAIR	AUP36HPA05N1000CI	35,200	Office - Trailer	1735	603	1,768	$101	$318	3.2
2684	37.5%	HP	MARVAIR	AVP36HPA05N1000B	35,200	Office - Trailer	1735	603	1,768	$101	$318	3.2

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
				I								
2684	37.5%	HP	UNKNOWN		24,000	Office - Trailer	1735	603	1,206	$69	$318	4.6
2684	37.5%	R	BARD	30WA	30,000	Office - Trailer	1735	463	1,157	$66	$318	4.8
2684	37.5%	R	BARD	30WA	30,000	Office - Trailer	1735	463	1,157	$66	$318	4.8
2684	37.5%	R	BARD	30WA	30,000	Office - Trailer	1735	463	1,157	$66	$318	4.8
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	463	1,388	$79	$318	4.0
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	463	1,388	$79	$318	4.0
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	463	1,388	$79	$318	4.0
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	463	1,388	$79	$318	4.0
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	578	1,156	$66	$318	4.8
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	578	1,156	$66	$318	4.8
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	578	1,156	$66	$318	4.8
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	578	1,156	$66	$318	4.8
2685	50.0%	HP	MARVAIR	AVP26H24	22,600	Office - Trailer	1735	578	1,089	$62	$318	5.1
2685	50.0%	HP	MARVAIR	AVP36HPA10N	35,200	Office - Trailer	1735	578	1,696	$97	$318	3.3
2685	50.0%	R	TRANE	BCW724A10EA0		Office - Trailer	1735	458	0	$0	$0	
2687	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
2687	0.0%	HP	MARVAIR		36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
2687	0.0%	HP	MARVAIR		36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
2701	100.0%	R	BARD	36WAI	36,000	Locker/Exercise	2701	339	1,016	$58	$318	5.5
2726	100.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	334	985	$56	$318	5.7
2726	100.0%	HP	BARD	WH361A05	35,600	Office - Modular	3725	334	991	$56	$318	5.6
2726	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Modular	3725	334	980	$56	$318	5.7
2727	75.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	529	1,568	$89	$318	3.6
2727	75.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
2727	75.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
2727	75.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2727	75.0%	HP	MARVAIR	AVP36HPA10N-2000BI	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
2727	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
2727	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
2727	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
2727	75.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
2728	0.0%	HP	BARD	36WH2	35,400	shop/Lab	1602	703	2,075	$118	$318	2.7
2728	0.0%	HP	BARD	36WH2	35,400	shop/Lab	1602	703	2,075	$118	$318	2.7
2728	0.0%	HP	BARD	36WH2	35,400	shop/Lab	1602	703	2,075	$118	$318	2.7
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	606	1,819	$104	$318	3.1
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	606	1,819	$104	$318	3.1
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	606	1,819	$104	$318	3.1
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	606	1,819	$104	$318	3.1
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	606	1,819	$104	$318	3.1
2775	35.7%	HP	BARD	36WA3	36,000	Office - Trailer	1735	606	1,819	$104	$318	3.1
2775	35.7%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	606	1,779	$101	$318	3.1
2775	35.7%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	606	1,779	$101	$318	3.1
2775	35.7%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	606	1,779	$101	$318	3.1
2775	35.7%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	606	1,779	$101	$318	3.1
2775	35.7%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	606	1,779	$101	$318	3.1
2775	35.7%	HP	MARVAIR	AVP36HPA05N13000BI	35,200	Office - Trailer	1735	606	1,779	$101	$318	3.1
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	LUXAIRE	BBHP-FQ24AA	36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	N/A		36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2775	35.7%	R	UNKNOWN		36,000	Office - Trailer	1735	463	1,390	$79	$318	4.0
2777	100.0%	HP	BARD	24WH2	22,600	classroom/conference	2627	217	409	$23	$318	13.6
2777	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	classroom/conference	2627	217	637	$36	$318	8.8
2777	100.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	classroom/conference	2627	217	637	$36	$318	8.8
2787	0.0%	HP	MARVAIR	AVP36HPA00N-1000	35,200	Locker/Exercise	2701	400	1,172	$67	$318	4.8
2787	0.0%	R	BARD	WA361A10CCL	36,000	Locker/Exercise	2701	339	1,016	$58	$318	5.5
2787	0.0%	R	MARVAIR		36,000	Locker/Exercise	2701	339	1,016	$58	$318	5.5
2801	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
2801	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
2801	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
2802	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
2802	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
2802	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
2804	0.0%	R	BARD	A48WA2	47,000	Office - Trailer	1735	476	1,864	$106	$318	3.0
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
2825	0.0%	HP	TRANE	WSC036A3R0A01000000000000A	36,000	Office - Modular	3725	431	1,292	$74	$318	4.3
2925	100.0%	HP	CARRIER	50YQ060300	58,000	Office - Modular	3725	334	1,614	$92	$318	3.5

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2925	100.0%	HP	CARRIER	50YQ060300	58,000	Office - Modular	3725	334	1,614	$92	$318	3.5
2925	100.0%	HP	TEMPSTAR	PHAD60NK30	57,000	Office - Modular	3725	334	1,586	$90	$318	3.5
3180	0.0%	HP	BARD	36WH	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
3180	0.0%	HP	BARD	36WH	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
3180	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
3180	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
3180	0.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
3180	0.0%	HP	MARVAIR	AVP36HPA10N1000CI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
3203	33.3%	HP	BARD	36WHI	36,000	shop/Lab	1602	660	1,981	$113	$318	2.8
3203	33.3%	HP	BARD	36WHI	36,000	shop/Lab	1602	660	1,981	$113	$318	2.8
3204	0.0%	R	BARD	36WA1	36,000	shop/Lab	1602	661	1,982	$113	$318	2.8
3204	0.0%	R	BARD	36WA1	36,000	shop/Lab	1602	661	1,982	$113	$318	2.8
3226	0.0%	HP	CARRIER	50YQ036300	36,000	Office - Modular	3725	431	1,292	$74	$318	4.3
3226	0.0%	HP	CARRIER	50YQ036300	36,000	Office - Modular	3725	431	1,292	$74	$318	4.3
3226	0.0%	HP	CARRIER	50YQ036300	36,000	Office - Modular	3725	431	1,292	$74	$318	4.3
3226	0.0%	HP	TRANE	WCY036F100AC	35,600	Office - Modular	3725	431	1,277	$73	$318	4.4
3226	0.0%	HP	TRANE	WCY036F100AC	35,600	Office - Modular	3725	431	1,277	$73	$318	4.4
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92A1	42,500	Office - Modular	3725	334	1,183	$67	$318	4.7
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92A1	42,500	Office - Modular	3725	334	1,183	$67	$318	4.7
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92A1	42,500	Office - Modular	3725	334	1,183	$67	$318	4.7
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92A1	42,500	Office - Modular	3725	334	1,183	$67	$318	4.7
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92A1	42,500	Office - Modular	3725	334	1,183	$67	$318	4.7
3520	33.3%	HP	MARVAIR	AVP20HPA04N1000BI06883	20,140	Office - Trailer	1735	611	1,026	$58	$318	5.4
3520	33.3%	HP	MARVAIR	AVP36HPC09N1000BI06911	35,680	Office - Trailer	1735	611	1,817	$104	$318	3.1
3520	33.3%	R	BARD	24WA	23,000	Office - Trailer	1735	464	890	$51	$318	6.3

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3520	33.3%	R	BARD	24WA	23,000	Office - Trailer	1735	464	890	$51	$318	6.3
3520	33.3%	R	BARD	24WA	24,000	Office - Trailer	1735	464	929	$53	$318	6.0
3520	33.3%	R	BARD	30WA	30,000	Office - Trailer	1735	464	1,161	$66	$318	4.8
3520	33.3%	R	BARD	30WA1	30,000	Office - Trailer	1735	464	1,161	$66	$318	4.8
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	MARVAIR		36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	UNKNOWN		36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3520	33.3%	R	UNKNOWN		36,000	Office - Trailer	1735	464	1,393	$79	$318	4.0
3526	0.0%	HP	MARVAIR	AVP36MP	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
3526	0.0%	HP	MARVAIR	AVP36MP	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
3526	0.0%	HP	MARVAIR	AVP36MP	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3527	100.0%	R	CARRIER	38YH048310	36,000	Office - Modular	3725	231	693	$39	$318	8.1

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3527	100.0%	R	CARRIER	40QHS048	48,000	Office - Modular	3725	231	923	$53	$318	6.0
3555	0.0%	R	BARD	30WA1	30,000	Office - Trailer	1735	476	1,190	$68	$318	4.7
3577	50.0%	HP	B-D-P		36,000	Office - Trailer	1735	578	1,734	$99	$318	3.2
3577	50.0%	HP	DAY & NIGHT (BDP CO.)		36,000	Office - Trailer	1735	578	1,734	$99	$318	3.2
3577	50.0%	HP	DAY & NIGHT (BDP CO.)	542D037HP	38,000	Office - Trailer	1735	578	1,831	$104	$318	3.0
3577	50.0%	HP	PAYNE		36,000	Office - Trailer	1735	578	1,734	$99	$318	3.2
3577	50.0%	HP	TRANE	WCY036F100AC	35,600	Office - Trailer	1735	578	1,715	$98	$318	3.3
3703	0.0%	HP	BARD	WH361B09XX4	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
3703	0.0%	HP	MARVAIR	AVP48HPC09N-1000 CI	47,000	Office - Trailer	1735	677	2,652	$151	$318	2.1
3703	0.0%	R	BARD	24WA	23,000	Office - Trailer	1735	476	912	$52	$318	6.1
3703	0.0%	R	BARD	24WA	23,000	Office - Trailer	1735	476	912	$52	$318	6.1
3703	0.0%	R	BARD	24WA	23,000	Office - Trailer	1735	476	912	$52	$318	6.1
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	476	1,190	$68	$318	4.7
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	476	1,190	$68	$318	4.7
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	476	1,190	$68	$318	4.7
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	476	1,190	$68	$318	4.7
3703	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
3703	0.0%	R	BARD	P24A1	23,000	Office - Trailer	1735	476	912	$52	$318	6.1
3703	0.0%	R	BARD	P36A1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
3703	0.0%	R	BARD	P36A1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
3703	0.0%	R	BARD	P76A1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
3724	100.0%	R	BARD	P48A5-3	48,000	Office - Modular	3725	231	923	$53	$318	6.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	CARRIER		36,000	Office - Modular	3725	231	693	$39	$318	8.1
3725	100.0%	R	CARRIER		36,000	Office - Modular	3725	231	693	$39	$318	8.1
3725	100.0%	R	TRANE	SACB-C156-A	48,000	Office - Modular	3725	231	923	$53	$318	6.0
3725	100.0%	R	TRANE	TCC024F100B2	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100B2	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	24,000	Office - Modular	3725	231	462	$26	$318	12.1
3725	100.0%	R	TRANE	TCC024F100BD	24,000	Office - Modular	3725	231	462	$26	$318	12.1
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3725	100.0%	R	TRANE	TCC204F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	HP	BARD		36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	231	450	$26	$318	12.4
3751	33.3%	HP	BARD	36WH2	35,400	Office - Trailer	1735	611	1,803	$103	$318	3.1
3751	33.3%	HP	MARVAIR	AVP36HPA5N1000BI	35,200	Office - Trailer	1735	611	1,793	$102	$318	3.1
3751	33.3%	R	BARD	36WA4	35,000	Office - Trailer	1735	464	1,354	$77	$318	4.1

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
376	0.0%	R	BARD	36WA3	36,000	shop/Lab	1602	661	1,982	$113	$318	2.8
376	0.0%	R	BARD	48WA3	47,000	shop/Lab	1602	661	2,588	$147	$318	2.2
3775	0.0%	HP	MARVAIR	AVP36HPA05NFF86 A0	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
3775	0.0%	HP	MARVAIR	AVP36HPA05NFF86 A0	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
379	0.0%	HP	BARD	36WH23	35,400	shop/Lab	1602	703	2,075	$118	$318	2.7
379	0.0%	HP	BARD	36WH23	35,400	shop/Lab	1602	703	2,075	$118	$318	2.7
379	0.0%	HP	BARD	36WH23	35,400	shop/Lab	1602	703	2,075	$118	$318	2.7
379	0.0%	HP	BARD	48WH23	48,500	shop/Lab	1602	703	2,843	$162	$318	2.0
382	0.0%	HP	WESTINGHOUSE	UB022-BW	23,000	shop/Lab	1602	703	1,348	$77	$318	4.1
3925	0.0%	R	BARD	30WA1	30,000	classroom/conference	2627	235	588	$34	$318	9.5
3925	0.0%	R	BARD	30WA1	30,000	classroom/conference	2627	235	588	$34	$318	9.5
3925	0.0%	R	BARD	30WA1	30,000	classroom/conference	2627	235	588	$34	$318	9.5
4107	100.0%	R	MARVAIR	AVP20ACA-03NH87	18,600	storage	1886	332	514	$29	$318	10.9
4128	0.0%	HP	MARVAIR	AVP36HPA05N-1000GI	35,200	Food	4128	431	1,263	$72	$318	4.4
4161	100.0%	R	BARD	48WA3	47,000	Office - Trailer	1735	441	1,727	$98	$318	3.2
4161	100.0%	R	MARVAIR	48WA3	47,000	Office - Trailer	1735	441	1,727	$98	$318	3.2
4180	20.0%	HP	BARD	30WHI	28,500	Office - Trailer	1735	638	1,514	$86	$318	3.7
4180	20.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	638	1,913	$109	$318	2.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4180	20.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	638	1,913	$109	$318	2.9
4180	20.0%	HP	BARD	WH36A05XX4XXX	35,600	Office - Trailer	1735	638	1,891	$108	$318	3.0
4180	20.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	638	1,870	$107	$318	3.0
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4182	100.0%	HP	MARVAIR	WH361A05	35,600	Office - Trailer	1735	479	1,422	$81	$318	3.9
4182	100.0%	HP	MARVAIR	WH361A05	35,600	Office - Trailer	1735	479	1,422	$81	$318	3.9
4184	0.0%	HP	BARD	36WH1	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
4184	0.0%	HP	BARD	36WH1	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
4184	0.0%	HP	BARD	36WH1	36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
4184	0.0%	HP	BARD	36WH7-A050	35,000	Office - Trailer	1735	677	1,975	$113	$318	2.8
4184	0.0%	R	MARVAIR		48,000	Office - Trailer	1735	476	1,904	$109	$318	2.9
4302	50.0%	HP	BARD	WH361R05	35,600	Office - Trailer	1735	578	1,715	$98	$318	3.3
4302	50.0%	HP	CARRIER	WCC024F100BG	23,800	Office - Trailer	1735	578	1,147	$65	$318	4.9
4302	50.0%	HP	CARRIER	WCC024F100BG	23,800	Office - Trailer	1735	578	1,147	$65	$318	4.9
4302	50.0%	HP	MARVAIR	AVP24HPA04N-1000BI	22,600	Office - Trailer	1735	578	1,089	$62	$318	5.1
4302	50.0%	HP	MARVAIR	AVP36HPA05N-1000 B1 06906	35,200	Office - Trailer	1735	578	1,696	$97	$318	3.3
4302	50.0%	R	BARD	18WA	16,500	Office - Trailer	1735	458	630	$36	$318	8.9
4302	50.0%	R	BARD	18WA	16,500	Office - Trailer	1735	458	630	$36	$318	8.9
4302	50.0%	R	BARD	18WA	17,500	Office - Trailer	1735	458	669	$38	$318	8.3
4302	50.0%	R	BARD	1BWM2	36,000	Office - Trailer	1735	458	1,375	$78	$318	4.1

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4302	50.0%	R	BARD	24WA	23,000	Office - Trailer	1735	458	879	$50	$318	6.4
4302	50.0%	R	BARD	30WA	30,000	Office - Trailer	1735	458	1,146	$65	$318	4.9
4302	50.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	458	1,375	$78	$318	4.1
4302	50.0%	R	TRANE	BUSC5A	36,000	Office - Trailer	1735	458	1,375	$78	$318	4.1
4325	0.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4325	0.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4325	0.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4377	75.0%	HP	BARD	WH361895	35,600	Office - Trailer	1735	529	1,568	$89	$318	3.6
4377	75.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
4377	75.0%	HP	MARVAIR	AVP36HPA05N1000B 1	35,200	Office - Trailer	1735	529	1,551	$88	$318	3.6
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	450	1,349	$77	$318	4.1
4378	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N1000	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4378	0.0%	R	UNKNOWN		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4378	0.0%	R	UNKNOWN		36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4383	100.0%	HP	BARD	WH361AD5	35,600	Office - Trailer	1735	479	1,422	$81	$318	3.9
4383	100.0%	HP	MARVAIR	36WA1	36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
4383	100.0%	HP	MARVAIR	AVP36HP05N1000B1	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4383	100.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4383	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4383	100.0%	HP	MARVAIR	AVP36HPA1ON-2000BI	35,200	Office - Trailer	1735	479	1,406	$80	$318	4.0
4383	100.0%	HP	MARVAIR	F/02770-1000 CI CI AVP36HPA05N-1000	36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
4383	100.0%	HP	UNKNOWN	WH361ADS	36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	611	1,833	$105	$318	3.0
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	611	1,833	$105	$318	3.0
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	611	1,833	$105	$318	3.0
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	611	1,833	$105	$318	3.0
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	611	1,833	$105	$318	3.0
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	611	1,833	$105	$318	3.0
4387	20.0%	HP	MARVAIR	AVP30HPA05N-1000	30,000	Office - Trailer	1735	638	1,594	$91	$318	3.5
4387	20.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	638	1,870	$107	$318	3.0
4387	20.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	638	1,870	$107	$318	3.0
4387	20.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	638	1,870	$107	$318	3.0
4387	20.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	638	1,870	$107	$318	3.0
4387	20.0%	R	BARD	30WA	30,000	Office - Trailer	1735	469	1,172	$67	$318	4.8
4387	20.0%	R	BARD	30WA	30,000	Office - Trailer	1735	469	1,172	$67	$318	4.8

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4406	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4406	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4406	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
4406	0.0%	R	CARRIER	50YH030300	29,000	Office - Trailer	1735	476	1,150	$66	$318	4.9
4442	0.0%	HP	BARD	WH361A05XX4XXX	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	476	1,396	$80	$318	4.0
4475	0.0%	HP	BDP-PAYNE	542EP060	60,000	shop/Lab	1602	703	3,517	$200	$318	1.6
4475	0.0%	HP	BDP-PAYNE	542EP060	60,000	shop/Lab	1602	703	3,517	$200	$318	1.6
4525	75.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	358	1,056	$60	$318	5.3
4525	75.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	358	1,056	$60	$318	5.3
4525	75.0%	HP	BDP-PAYNE	542EP042	40,000	Office - Modular	3725	358	1,194	$68	$318	4.7
4525	75.0%	HP	BDP-PAYNE	542EP042	40,000	Office - Modular	3725	358	1,194	$68	$318	4.7
4525	75.0%	HP	BDP-PAYNE	542EP042	40,000	Office - Modular	3725	358	1,194	$68	$318	4.7
4525	75.0%	R			36,000	Office - Modular	3725	247	740	$42	$318	7.5
4576	100.0%	HP	BARD	36WH7-B09C	35,000	Communications /computer	5976	879	2,563	$146	$318	2.2
4675	30.0%	HP			36,000	Food	4128	381	1,143	$65	$318	4.9
4675	30.0%	HP			36,000	Food	4128	381	1,143	$65	$318	4.9
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	381	1,143	$65	$318	4.9
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	381	1,143	$65	$318	4.9
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	381	1,143	$65	$318	4.9
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	381	1,143	$65	$318	4.9
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	381	1,143	$65	$318	4.9
4675	30.0%	HP	BARD	48WH6A10C	48,000	Food	4128	381	1,523	$87	$318	3.7

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4675	30.0%	HP	BARD	48WH6A10C	48,000	Food	4128	381	1,523	$87	$318	3.7
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	381	1,124	$64	$318	5.0
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	381	1,124	$64	$318	5.0
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	381	1,124	$64	$318	5.0
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	381	1,124	$64	$318	5.0
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	381	1,124	$64	$318	5.0
4675	30.0%	HP	CARRIER	542EOPO36000AAAE	35,400	Food	4128	381	1,124	$64	$318	5.0
4675	30.0%	HP	MARVAIR	AVP36HPA05N-1000B1	35,200	Food	4128	381	1,117	$64	$318	5.0
4675	30.0%	HP	RUUD AIR CONDITIONERS	VPDC075CK	93,000	Food	4128	381	2,952	$168	$318	1.9
4675	30.0%	HP	TEMPSTAR	PHF048H000A	48,000	Food	4128	381	1,523	$87	$318	3.7
4675	30.0%	HP	UNKNOWN	HVE36H-1-056	36,000	Food	4128	381	1,143	$65	$318	4.9
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	903	9,027	$515	$318	0.6
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	903	9,027	$515	$318	0.6
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	903	9,027	$515	$318	0.6
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	903	9,027	$515	$318	0.6
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	903	9,027	$515	$318	0.6
473	0.0%	HP	CARRIER	50NQ-036-310	35,400	storage	1886	575	1,697	$97	$318	3.3
501	100.0%	HP	BARD	WH181AO8XX4XXX	19,000	Office - Modular	3725	334	529	$30	$318	10.6
5104	100.0%	HP	MARVAIR	AVP30HPA05N-1000B1	30,000	Office - Trailer	1735	479	1,198	$68	$318	4.7
5105	0.0%	HP	CARRIER	51FYF318351	72,000	Office - Trailer	1735	677	4,063	$232	$318	1.4
5125	0.0%	HP	MARVAIR	AVP201PA04N-1000B1	20,000	Office - Trailer	1735	677	1,128	$64	$318	4.9
5125	0.0%	HP	MARVAIR	AVP20HPA04N1000B1	20,000	Office - Trailer	1735	677	1,128	$64	$318	4.9
5125	0.0%	HP	MARVAIR	AVP30HPA05N-1000B1	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
5125	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	677	1,693	$96	$318	3.3
5207	100.0%	HP	BARD		18,000	storage	1886	454	680	$39	$318	8.2
5225	25.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	628	1,883	$107	$318	3.0
5225	25.0%	HP	BARD	WH361005X	35,600	Office - Trailer	1735	628	1,862	$106	$318	3.0
5225	25.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	628	1,841	$105	$318	3.0
5226	75.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	529	1,560	$89	$318	3.6
5226	75.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	529	1,568	$89	$318	3.6
5226	75.0%	HP	BARD	WH361R00	35,600	Office - Trailer	1735	529	1,568	$89	$318	3.6
5226	75.0%	HP	MARVAIR	AVP30HPA05N1000BI	30,000	Office - Trailer	1735	529	1,322	$75	$318	4.2
5226	75.0%	HP	MARVAIR	AVP30HPA05N1000BI	30,000	Office - Trailer	1735	529	1,322	$75	$318	4.2
5226	75.0%	R	BARD	30WA	30,000	Office - Trailer	1735	450	1,124	$64	$318	5.0
5226	75.0%	R	BARD	30WA	30,000	Office - Trailer	1735	450	1,124	$64	$318	5.0
531	0.0%	R	CARRIER	28CX1636F1112N	240,000	shop/Lab	1602	661	13,213	$753	$318	0.4
531	0.0%	R	CARRIER	28CX1636FB1112M	240,000	shop/Lab	1602	661	13,213	$753	$318	0.4
5425	0.0%	HP	BARD	WH361A00	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
5425	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
5425	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
5425	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
5425	0.0%	HP	MARVAIR	AVP36HP05H100B1	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
5425	0.0%	HP	MARVAIR	AVP36HP05N100B	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
5425	0.0%	HP	MARVAIR	AVP36HP05N100B1	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
5425	0.0%	HP	MARVAIR	AVP36HPA05N1000BI06906	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
5425	0.0%	HP	MARVAIR	AVP36HPA05N1000BI06906	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	587	1,722	$98	$318	3.2
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	587	1,722	$98	$318	3.2
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	587	1,722	$98	$318	3.2
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	587	1,722	$98	$318	3.2
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	587	1,722	$98	$318	3.2
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	587	1,722	$98	$318	3.2
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	587	1,722	$98	$318	3.2
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	460	1,380	$79	$318	4.0
5475	0.0%	HP	CARRIER	50HJQ005-521	46,000	Office - Modular	3725	431	1,650	$94	$318	3.4
5475	0.0%	HP	CARRIER	50HJQ006501	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	HP	CARRIER	50HJQ006501	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	HP	CARRIER	50HJQ006501	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	HP	CARRIER	50HS060501AA	57,500	Office - Modular	3725	431	2,063	$118	$318	2.7
5475	0.0%	HP	CARRIER	50HS060501AA	57,500	Office - Modular	3725	431	2,063	$118	$318	2.7

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5475	0.0%	HP	LUXAIRE	BATHF024AB	24,000	Office - Modular	3725	431	861	$49	$318	6.5
5475	0.0%	HP	PAYNE	542EP042	40,000	Office - Modular	3725	431	1,435	$82	$318	3.9
5475	0.0%	HP	PAYNE	542EP042	40,000	Office - Modular	3725	431	1,435	$82	$318	3.9
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	431	1,686	$96	$318	3.3
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	431	1,686	$96	$318	3.3
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	431	1,686	$96	$318	3.3
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	431	1,686	$96	$318	3.3
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	431	2,081	$119	$318	2.7
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	431	2,081	$119	$318	2.7
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	431	2,081	$119	$318	2.7
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	431	2,081	$119	$318	2.7
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	431	2,081	$119	$318	2.7
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	431	2,081	$119	$318	2.7
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	431	2,081	$119	$318	2.7
5475	0.0%	HP	TRANE	WSC048A3R0A01	48,000	Office - Modular	3725	431	1,722	$98	$318	3.2
5475	0.0%	HP	TRANE	WSC060A3R0A	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	HP	TRANE	WSC060A3R0A	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	HP	TRANE	WSC060A3R0A	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	HP	TRANE	WSC060A3R0A01	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	HP	TRANE	WSC060A3REA01	60,000	Office - Modular	3725	431	2,153	$123	$318	2.6
5475	0.0%	R	LENNOX		36,000	Office - Modular	3725	294	882	$50	$318	6.3
5475	0.0%	R	PAYNE	559E5024	24,600	Office - Modular	3725	294	602	$34	$318	9.3
5475	0.0%	R	PAYNE	55EJ024	24,600	Office - Modular	3725	294	602	$34	$318	9.3
5475	0.0%	R	TRANE		36,000	Office - Modular	3725	294	882	$50	$318	6.3
5475	0.0%	R	TRANE	BTC090C300FO	92,000	Office - Modular	3725	294	2,253	$128	$318	2.5
5475	0.0%	R	UNKNOWN		36,000	Office - Modular	3725	294	882	$50	$318	6.3
5626	40.0%	HP	BARD	24WHI	23,000	Office - Modular	3725	392	751	$43	$318	7.4
5626	40.0%	HP	BARD	24WHI	23,000	Office - Modular	3725	392	751	$43	$318	7.4
5626	40.0%	HP	BARD	24WHI	23,000	Office - Modular	3725	392	751	$43	$318	7.4

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5626	40.0%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	269	940	$54	$318	5.9
5626	40.0%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	269	940	$54	$318	5.9
5626	40.0%	R	CARRIER	40FS160310	36,000	Office - Modular	3725	269	806	$46	$318	6.9
5626	40.0%	R	CARRIER	40FS200310	36,000	Office - Modular	3725	269	806	$46	$318	6.9
5627	14.3%	R	AMERICAN STANDARD	YCC036F3HOBC	36,000	Office - Modular	3725	285	855	$49	$318	6.5
5627	14.3%	R	AMERICAN STANDARD	YCC036F3HOBC	36,000	Office - Modular	3725	285	855	$49	$318	6.5
5627	14.3%	R	AMERICAN STANDARD	YCC036F3MOBC	36,000	Office - Modular	3725	285	855	$49	$318	6.5
5627	14.3%	R	AMERICAN STANDARD	YCC036F3MOBC	36,000	Office - Modular	3725	285	855	$49	$318	6.5
5627	14.3%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	285	997	$57	$318	5.6
5627	14.3%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	285	997	$57	$318	5.6
5627	14.3%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	285	997	$57	$318	5.6
5627	14.3%	R	CARRIER	48DL003	80,000	Office - Modular	3725	285	1,899	$108	$318	2.9
5627	14.3%	R	CARRIER	48DL045	100,000	Office - Modular	3725	285	2,374	$135	$318	2.4
571	92.3%	HP	B-D-P	559EE060	57,500	Office - Modular	3725	341	1,636	$93	$318	3.4
571	92.3%	HP	CARRIER	50TJQ004-M-6012C	36,000	Office - Modular	3725	341	1,024	$58	$318	5.5
571	92.3%	HP	CARRIER	50TJQ004-M-601ZC	36,000	Office - Modular	3725	341	1,024	$58	$318	5.5
571	92.3%	HP	CARRIER	50TJQ005-M-6012C	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	341	1,366	$78	$318	4.1
571	92.3%	HP	CARRIER	50TJQ006-M-601ZC	60,000	Office - Modular	3725	341	1,707	$97	$318	3.3
571	92.3%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	341	2,048	$117	$318	2.7
571	92.3%	R	CARRIER	50TJ1005-M-611ZC	47,000	Office - Modular	3725	236	923	$53	$318	6.0
5974	0.0%	HP	BARD	30HW1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	677	1,670	$95	$318	3.3
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	621	1,831	$104	$318	3.0
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	621	1,831	$104	$318	3.0
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	621	1,831	$104	$318	3.0
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	621	1,831	$104	$318	3.0
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	621	1,831	$104	$318	3.0
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	621	1,831	$104	$318	3.0
5975	28.6%	HP	BARD	38WH2	36,000	Office - Trailer	1735	621	1,862	$106	$318	3.0
5975	28.6%	HP	MARVAIR	AVP36HPA050N-1000	35,200	Office - Trailer	1735	621	1,820	$104	$318	3.1
5975	28.6%	HP	UNKNOWN		36,000	Office - Trailer	1735	621	1,862	$106	$318	3.0
5976	80.0%	HP	BARD	WH151A04	19,000	Office - Trailer	1735	519	821	$47	$318	6.8
5976	80.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	519	1,020	$58	$318	5.5
5976	80.0%	HP	MARVAIR	AVP24HPA04N-1000BI	22,600	Office - Trailer	1735	519	977	$56	$318	5.7
5976	80.0%	HP	MARVAIR	AVP24HPA04N-1000BI	22,600	Office - Trailer	1735	519	977	$56	$318	5.7
5976	80.0%	R	POMONA AIR	ACC1000220466	60,000	Office - Trailer	1735	448	2,240	$128	$318	2.5
5976	80.0%	R	POMONA AIR	ACC150022046	90,000	Office - Trailer	1735	448	3,360	$192	$318	1.7
5978	77.8%	HP	BARD	AVP36HPA10N-1000 B1	35,200	Office - Trailer	1735	523	1,535	$87	$318	3.6
5978	77.8%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	523	1,552	$88	$318	3.6
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	449	1,316	$75	$318	4.2
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	449	1,316	$75	$318	4.2
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	449	1,316	$75	$318	4.2
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	449	1,316	$75	$318	4.2
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	449	1,316	$75	$318	4.2

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	449	1,316	$75	$318	4.2
5978	77.8%	R	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	449	1,316	$75	$318	4.2
5978	77.8%	R	POMONA AIR	ACC60C20466	36,000	Office - Trailer	1735	449	1,346	$77	$318	4.1
5979	0.0%	HP	BARD	MHD30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	677	1,580	$90	$318	3.5
5981	0.0%	R	INTERTHERM, INC	AWY048BAVAA1001	46,500	Office - Trailer	1735	476	1,844	$105	$318	3.0
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5982	50.0%	HP	BARD	WH301	30,000	Office - Trailer	1735	578	1,445	$82	$318	3.9

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	458	1,192	$68	$318	4.7
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	458	1,192	$68	$318	4.7
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	458	1,192	$68	$318	4.7
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	458	1,192	$68	$318	4.7
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05-01	31,200	Office - Trailer	1735	458	1,192	$68	$318	4.7
5982	50.0%	R	MARVAIR	AVP36HPAO5N-1000 CI	35,625	Office - Trailer	1735	458	1,361	$78	$318	4.1
5982	50.0%	R	MARVAIR	AVP36HPAQ5N-1000 BI 06906	35,636	Office - Trailer	1735	458	1,361	$78	$318	4.1
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA0501	31,200	Office - Trailer	1735	476	1,237	$71	$318	4.5
5985	25.0%	HP	BARD	WH301A05	30,000	Office - Trailer	1735	628	1,569	$89	$318	3.6
5985	25.0%	R	INTERTHERM, INC	PWY030BABAA-05-01	31,200	Office - Trailer	1735	467	1,215	$69	$318	4.6
5985	25.0%	R	INTERTHERM, INC	PWY030BABAA-05-01	31,200	Office - Trailer	1735	467	1,215	$69	$318	4.6
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	467	1,215	$69	$318	4.6

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	467	1,215	$69	$318	4.6
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	467	1,215	$69	$318	4.6
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	467	1,215	$69	$318	4.6
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05-01	31,200	Office - Trailer	1735	467	1,215	$69	$318	4.6
6178	100.0%	HP	BARD	WH31A050N1000CI	35,600	Locker/Exercise	2701	400	1,186	$68	$318	4.7
6178	100.0%	HP	MARVAIR	AVP36HPA10N-1000 B1	35,200	Locker/Exercise	2701	400	1,172	$67	$318	4.8
6178	100.0%	R	BARD	30WA	30,000	Locker/Exercise	2701	339	846	$48	$318	6.6
6178	100.0%	R	BARD	30WA	30,000	Locker/Exercise	2701	339	846	$48	$318	6.6
6179	0.0%	HP	PAYNE	542EP036	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
6179	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	431	1,686	$96	$318	3.3
6179	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	431	1,686	$96	$318	3.3
6179	0.0%	R	PAYNE	559EP036	35,000	Office - Modular	3725	294	857	$49	$318	6.5
619	0.0%	HP			36,000	storage	1886	575	1,726	$98	$318	3.2
619	0.0%	HP	CARRIER	50DQ00440	35,000	storage	1886	575	1,678	$96	$318	3.3
619	0.0%	HP	TRANE	WCC024F100BD	23,800	storage	1886	575	1,141	$65	$318	4.9
619	0.0%	HP	TRANE	WCC024F100BD	23,800	storage	1886	575	1,141	$65	$318	4.9
619	0.0%	R	CARRIER	50DF024600	240,000	storage	1886	412	8,239	$470	$318	0.7
619	0.0%	R	CARRIER	50DP012600PC	120,000	storage	1886	412	4,119	$235	$318	1.4
619	0.0%	R	CARRIER	50DP016600SC	160,000	storage	1886	412	5,493	$313	$318	1.0
619	0.0%	R	LENNOX	GCS3-46380	42,000	storage	1886	412	1,442	$82	$318	3.9
619	0.0%	R	TRANE	102SCW		storage	1886	412	0	$0	$0	
619	0.0%	R	TRANE	35SC		storage	1886	412	0	$0	$0	
619	0.0%	R	TRANE	SC54EE		storage	1886	412	0	$0	$0	
6203	0.0%	HP	BARD	24WHI	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
6203	0.0%	HP	BARD	24WHI	23,000	Office - Trailer	1735	677	1,298	$74	$318	4.3
6203	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	677	1,332	$76	$318	4.2
6203	0.0%	HP	BARD	WH361A05XX4XXX	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
6203	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
6203	0.0%	R	BARD	36WA	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
6205	0.0%	HP	MARVAIR		36,000	Office - Trailer	1735	677	2,031	$116	$318	2.7
624	100.0%	HP	BARD	WH181A04	19,000	Office - Modular	3725	334	529	$30	$318	10.6
6325	0.0%	HP	CARRIER	50PQ016??520MA	180,000	Office - Modular	3725	431	6,458	$368	$318	0.9
6525	0.0%	R	BARD	36WA	36,000	classroom/conference	2627	235	706	$40	$318	7.9
6525	0.0%	R	BARD	36WA	36,000	classroom/conference	2627	235	706	$40	$318	7.9
6526	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	677	2,009	$114	$318	2.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	677	1,986	$113	$318	2.8
6526	0.0%	R	BARD	18WA	16,500	Office - Trailer	1735	476	654	$37	$318	8.5
6526	0.0%	R	BARD	18WA	17,500	Office - Trailer	1735	476	694	$40	$318	8.0
6526	0.0%	R	BARD	WA181A05XX4XXX	18,300	Office - Trailer	1735	476	726	$41	$318	7.7
6527	100.0%	HP	MARVAIR	NN	36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
6527	100.0%	HP	MARVAIR	NN	36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
6527	100.0%	HP	MARVAIR	NN	36,000	Office - Trailer	1735	479	1,438	$82	$318	3.9
6575	50.0%	HP	BARD	36WH1	36,000	classroom/conference	2627	278	835	$48	$318	6.7
6575	50.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	classroom/conference	2627	278	816	$47	$318	6.8
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	334	1,308	$75	$318	4.3
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	559EE060	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	B-D-P	559EMO36	57,500	Office - Modular	3725	334	1,600	$91	$318	3.5
671	100.0%	HP	CARRIER	50TJQ004-M-601ZC	36,000	Office - Modular	3725	334	1,002	$57	$318	5.6
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	334	2,004	$114	$318	2.8
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	334	2,004	$114	$318	2.8
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	334	2,004	$114	$318	2.8
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	334	2,004	$114	$318	2.8
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	334	2,004	$114	$318	2.8
671	100.0%	HP	CARRIER	TJQ007-M-611ZC	72,000	Office - Modular	3725	334	2,004	$114	$318	2.8
671	100.0%	HP	LENNOX	CHP15-413-IG	35,200	Office - Modular	3725	334	980	$56	$318	5.7
671	100.0%	HP	TRANE	WCC024F100BE	23,800	Office - Modular	3725	334	662	$38	$318	8.4
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	334	1,336	$76	$318	4.2
671	100.0%	HP	TRANE	WCD060C40CBD	62,000	Office - Modular	3725	334	1,725	$98	$318	3.2
671	100.0%	HP	TRANE	WCH024B100AA	23,600	Office - Modular	3725	334	657	$37	$318	8.5
671	100.0%	R	CARRIER	50TJ-004-M-611ZC	35,000	Office - Modular	3725	231	673	$38	$318	8.3
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	411	850	$48	$318	6.6
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	411	850	$48	$318	6.6

Building ID	Prog tstat %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	411	850	$48	$318	6.6
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	411	850	$48	$318	6.6
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	411	850	$48	$318	6.6
6925	20.0%	HP	CARRIER	50YQ030310	26,800	Office - Modular	3725	411	918	$52	$318	6.1
6925	20.0%	HP	CARRIER	50YQ030310	26,800	Office - Modular	3725	411	918	$52	$318	6.1
6925	20.0%	HP	CARRIER	50YQ030310	26,800	Office - Modular	3725	411	918	$52	$318	6.1
6925	20.0%	HP	TRANE	WCH036A300AB	35,600	Office - Modular	3725	411	1,220	$70	$318	4.6
6925	20.0%	HP	TRANE	WCH036A300AC	35,600	Office - Modular	3725	411	1,220	$70	$318	4.6
6925	20.0%	HP	TRANE	WCH036A300AC	35,600	Office - Modular	3725	411	1,220	$70	$318	4.6
6926	0.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
6926	0.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
6926	0.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	431	1,270	$72	$318	4.4
6928	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
6928	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
6928	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	476	1,428	$81	$318	3.9
6951	0.0%	HP	BARD	48WH1	47,000	classroom/conference	2627	339	1,328	$76	$318	4.2
6951	0.0%	HP	BARD	48WH1	47,000	classroom/conference	2627	339	1,328	$76	$318	4.2
									1,667,596	$95,053	$377,320	4.0

Appendix F: Facility Wide Savings for HVAC Scheduling Measure

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
110	0.0%	HP	BARD	37WH7-AO5C	36,000	storage	1886	810	2,429	$138	$840	6.1
1277	100.0%	HP	CARRIER	50HJQ014 500QA	140,000	shop/Lab	1602	299	3,486	$199	$840	4.2
1277	100.0%	HP	CARRIER	50HX-060-501AA	57,500	shop/Lab	1602	299	1,432	$82	$840	10.3
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1280	0.0%	R	WALL-KING	PWYO30BAVAA1001	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1401	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	BARD	WH241-A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
1402	0.0%	HP	WESTINGHOUSE	UBO22KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1402	0.0%	R	WESTINGHOUSE		60,000	Office - Trailer	1735	1517	7,586	$432	$840	1.9
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1403	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
1404	0.0%	R	CARRIER	50DD016400	150,000	Office - Trailer	1735	1517	18,966	$1,081	$840	0.8
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	BARD	WH301A05XX4XXX	30,000	Office - Trailer	1735	711	1,777	$101	$840	8.3
1405	83.3%	HP	UNKNOWN		36,000	Office - Trailer	1735	711	2,132	$122	$840	6.9
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	711	1,362	$78	$840	10.8
1405	83.3%	R	CARRIER	40RR012550	120,000	Office - Trailer	1735	791	7,910	$451	$840	1.9
1405	83.3%	R	TRANE	BU-7A	36,000	Office - Trailer	1735	791	2,373	$135	$840	6.2
1405	83.3%	R	TRANE	SAHE-B756-AA	60,000	Office - Trailer	1735	791	3,955	$225	$840	3.7
1405	83.3%	R	TRANE	SAHE-B756-AA	60,000	Office - Trailer	1735	791	3,955	$225	$840	3.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	BARD	WH242A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1406	100.0%	HP	TRANE	WCC036F100BE	36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1406	100.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	589	1,130	$64	$840	13.0
1408	100.0%	HP	MARVAIR	AVP20HPA04N-1000 BI 06883	20,000	Food	4128	129	215	$12	$840	68.5
1408	100.0%	R	BARD	24WA	24,000	Food	4128	102	205	$12	$840	72.0
1413	100.0%	HP	MARVAIR	AVP36HHPA10N	35,200	Communications /computer	5976	274	804	$46	$840	18.3
1413	100.0%	HP	MARVAIR	AVP36HPA10N	35,200	Communications /computer	5976	274	804	$46	$840	18.3
1456	33.3%	HP	TEMPSTAR	NPHAD36N1K4	36,000	Office - Trailer	1735	1075	3,225	$184	$840	4.6
1456	33.3%	HP	TEMPSTAR	PHF024K000A	24,000	Office - Trailer	1735	1075	2,150	$123	$840	6.9
1456	33.3%	HP	TEMPSTAR	PHF024K000A	24,000	Office - Trailer	1735	1075	2,150	$123	$840	6.9
1456	33.3%	HP	TEMPSTAR	PHF030K000A	30,000	Office - Trailer	1735	1075	2,688	$153	$840	5.5
1456	33.3%	HP	TEMPSTAR	PHF030K000A	30,000	Office - Trailer	1735	1075	2,688	$153	$840	5.5
1456	33.3%	R	BDP-PAYNE	5590024PAC	24,000	Office - Trailer	1735	1227	2,454	$140	$840	6.0
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1481	0.0%	R	INTERTHERM, INC	PWYC36BAVAA 5	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
1492	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1517	3,793	$216	$840	3.9
1492	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1517	3,793	$216	$840	3.9
1526	100.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	646	1,937	$110	$840	7.6
1526	100.0%	R	UNKNOWN	36WA1	36,000	Office - Trailer	1735	646	1,937	$110	$840	7.6
1527	100.0%	R	BARD	18WA	17,500	Office - Trailer	1735	646	942	$54	$840	15.6
1527	100.0%	R	BARD	24WA	23,000	Office - Trailer	1735	646	1,238	$71	$840	11.9
1527	100.0%	R	BARD	24WA	23,000	Office - Trailer	1735	646	1,238	$71	$840	11.9
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	646	1,614	$92	$840	9.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	646	1,614	$92	$840	9.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	646	1,614	$92	$840	9.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	646	1,614	$92	$840	9.1
1527	100.0%	R	BARD	30WA	30,000	Office - Trailer	1735	646	1,614	$92	$840	9.1
1527	100.0%	R	BARD	WA182A10XX4	18,300	Office - Trailer	1735	646	985	$56	$840	15.0
1527	100.0%	R	BARD	WA241A10XX4	24,000	Office - Trailer	1735	646	1,291	$74	$840	11.4
1527	100.0%	R	BARD	WA241A10XX4	24,000	Office - Trailer	1735	646	1,291	$74	$840	11.4
1527	100.0%	R	BARD	WA301A10	31,000	Office - Trailer	1735	646	1,668	$95	$840	8.8
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	646	1,668	$95	$840	8.8
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	646	1,668	$95	$840	8.8
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	646	1,668	$95	$840	8.8
1527	100.0%	R	BARD	WA301A10XX4	31,000	Office - Trailer	1735	646	1,668	$95	$840	8.8
1541	0.0%	HP	BARD	WH301A05XX4	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1541	0.0%	HP	BARD	WH301A05XX4	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5
1541	0.0%	HP	BARD	WH301A05XX4	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5
1578	0.0%	HP	BARD	24WH2	22,600	Office - Trailer	1735	1318	2,482	$141	$840	5.9
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1318	3,888	$222	$840	3.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1318	3,888	$222	$840	3.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1318	3,888	$222	$840	3.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1318	3,888	$222	$840	3.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1318	3,888	$222	$840	3.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1318	3,888	$222	$840	3.8
1578	0.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1318	3,888	$222	$840	3.8
1579	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1579	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1601	0.0%	R	BARD	36WA1	36,000	Office - Modular	3725	933	2,800	$160	$840	5.3
1601	0.0%	R	BARD	36WA1	36,000	Office - Modular	3725	933	2,800	$160	$840	5.3
1601	0.0%	R	BARD	36WA1	36,000	Office - Modular	3725	933	2,800	$160	$840	5.3
1601	0.0%	R	BARD	WA361B09XX4XXX	36,000	Office - Modular	3725	933	2,800	$160	$840	5.3
1602	0.0%	R	BARD	36WA3	36,000	storage	1886	850	2,549	$145	$840	5.8
1602	0.0%	R	BARD	36WA3	36,000	storage	1886	850	2,549	$145	$840	5.8
1602	0.0%	R	BARD	36WA3	36,000	storage	1886	850	2,549	$145	$840	5.8
1632	100.0%	HP	MARVAIR	AVP48HPA10CS	47,000	Office - Trailer	1735	589	2,308	$132	$840	6.4
1632	100.0%	HP	MARVAIR	AVP48HPA10CS	47,000	Office - Trailer	1735	589	2,308	$132	$840	6.4
1632	100.0%	HP	MARVAIR	AVP48HPA10CS	47,000	Office - Trailer	1735	589	2,308	$132	$840	6.4
1632	100.0%	HP	MARVAIR	AVP48HPA10CSH93CI	47,000	Office - Trailer	1735	589	2,308	$132	$840	6.4
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F300F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F400F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7
1677	0.0%	HP	GENERAL ELECTRIC	BWC090F400F0	90,000	Office - Modular	3725	736	5,518	$315	$840	2.7
1677	0.0%	HP	TRANE	BWC060C400G1	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
1677	0.0%	HP	TRANE	BWC060C400G1	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
1677	0.0%	HP	TRANE	BWC060C400G1	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1678	0.0%	R	MARVAIR		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
1680	100.0%	R	WALL-KING	PWY036CAVAA05	35,200	Office - Modular	3725	538	1,579	$90	$840	9.3
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	538	1,579	$90	$840	9.3
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	538	1,579	$90	$840	9.3
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	538	1,579	$90	$840	9.3
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	538	1,579	$90	$840	9.3
1680	100.0%	R	WALL-KING	PWY036CAVAA09	35,200	Office - Modular	3725	538	1,579	$90	$840	9.3
1713	100.0%	R	MARVAIR	AVP24ACA/10MO/C89B1	24,000	Locker/Exercise	2701	0	0	$0	$0	
1714	100.0%	HP	BARD	WH182A04XX4XXX	19,000	Locker/Exercise	2701	0	0	$0	$0	
1726	66.7%	HP	BARD	WH361B09XX4XXX	35,600	Office - Modular	3725	542	1,609	$92	$840	9.2
1726	66.7%	HP	MARVAIR	AVP36HPC09N1000 BI06911	35,691	Office - Modular	3725	542	1,613	$92	$840	9.1
1726	66.7%	R	BARD	36WA3	36,000	Office - Modular	3725	670	2,010	$115	$840	7.3
1726	66.7%	R	BARD	36WA6B09C	36,000	Office - Modular	3725	670	2,010	$115	$840	7.3
1727	100.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1727	100.0%	HP	BARD	WH241A04XX4XXXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1727	100.0%	HP	BARD	WH241A04XX4XXXX	23,600	Office - Trailer	1735	589	1,159	$66	$840	12.7
1727	100.0%	HP	MARVAIR	AVP24HPA05N1000	22,600	Office - Trailer	1735	589	1,110	$63	$840	13.3
1727	100.0%	HP	MARVAIR	AVP24HPA05N1000	22,600	Office - Trailer	1735	589	1,110	$63	$840	13.3

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1727	100.0%	HP	RHEEM		36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
1727	100.0%	HP	RHEEM	RPNA038C000	38,500	Office - Trailer	1735	589	1,891	$108	$840	7.8
1727	100.0%	R	BARD	24WA	23,000	Office - Trailer	1735	646	1,238	$71	$840	11.9
1730	100.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	646	1,883	$107	$840	7.8
1730	100.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	646	1,883	$107	$840	7.8
1730	100.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	646	1,883	$107	$840	7.8
1735	0.0%	HP	GENERAL ELECTRIC	BWC042C300DI	43,000	Office - Trailer	1735	1318	4,723	$269	$840	3.1
1735	0.0%	HP	GENERAL ELECTRIC	BWC042C300DI	43,000	Office - Trailer	1735	1318	4,723	$269	$840	3.1
1735	0.0%	HP	GENERAL ELECTRIC	BWC048C300DI	48,500	Office - Trailer	1735	1318	5,327	$304	$840	2.8
1736	0.0%	HP	TEMPSTAR	PHF048L000A	48,000	Office - Modular	3725	736	2,943	$168	$840	5.0
1736	0.0%	HP	TEMPSTAR	PHF048L000A	48,000	Office - Modular	3725	736	2,943	$168	$840	5.0
1736	0.0%	HP	TEMPSTAR	PHF048L000A	48,000	Office - Modular	3725	736	2,943	$168	$840	5.0
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	736	2,146	$122	$840	6.9
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	736	2,146	$122	$840	6.9
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	736	2,146	$122	$840	6.9
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	736	2,146	$122	$840	6.9
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	736	2,146	$122	$840	6.9
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	736	2,146	$122	$840	6.9
1739	0.0%	HP	BARD	36WH7A05C	35,000	Office - Modular	3725	736	2,146	$122	$840	6.9
1802	0.0%	HP	UNKNOWN		18,000	Locker/Exercise	2701	0	0	$0	$0	
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
1826	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1830	25.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1299	3,898	$222	$840	3.8
1879	80.0%	HP	BARD	36WH2	35,400	classroom/conference	2627	531	1,566	$89	$840	9.4
1879	80.0%	HP	BARD	GH481-B09EPXDXX		classroom/conference	2627	531	0	$0	$0	
1879	80.0%	HP	BARD	QH481-B09EPXDXX		classroom/conference	2627	531	0	$0	$0	
1879	80.0%	HP	BARD	WH421B09XX4XXX	41,500	classroom/conference	2627	531	1,835	$105	$840	8.0
1879	80.0%	HP	TRANE	WSC048A3R0A0100 0000000000A	48,000	classroom/conference	2627	531	2,123	$121	$840	6.9
1879	80.0%	HP	TRANE	WSC048A3R0A0300 0000000000A	48,000	classroom/conference	2627	531	2,123	$121	$840	6.9

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1879	80.0%	HP	TRANE	WSC048A3R0A0D000000000000A	48,000	classroom/conference	2627	531	2,123	$121	$840	6.9
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	589	1,719	$98	$840	8.6
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	589	1,719	$98	$840	8.6
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	589	1,719	$98	$840	8.6
1884	100.0%	HP	BARD	36WH5	35,000	Office - Trailer	1735	589	1,719	$98	$840	8.6
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
1885	75.0%	HP	MARVAIR	AVP36HPA-05NF-L87AO	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
1885	75.0%	HP	MARVAIR	AVP38HPA-05NF-H87AO	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
1885	75.0%	HP	MARVAIR	AVP38HPA-05NF-H87AO	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
1886	0.0%	HP	BARD	36WH6	35,000	shop/Lab	1602	660	1,926	$110	$840	7.7
1886	0.0%	HP	BARD	MHP36AA050	33,600	shop/Lab	1602	660	1,849	$105	$840	8.0
1886	0.0%	HP	BARD	MHP36AA05C	33,600	shop/Lab	1602	660	1,849	$105	$840	8.0
1886	0.0%	HP	BARD	MHP36AA05C	33,600	shop/Lab	1602	660	1,849	$105	$840	8.0
1887	100.0%	HP	CARRIER	50QQ036540	34,800	Office - Trailer	1735	589	1,709	$97	$840	8.6
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1887	100.0%	HP	MARVAIR		18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1887	100.0%	HP	MARVAIR	HFAFNE	18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3
1888	100.0%	HP	RHEEM	RPNC036J000	36,200	Office - Trailer	1735	589	1,778	$101	$840	8.3
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	589	2,063	$118	$840	7.1
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	589	2,063	$118	$840	7.1
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	589	2,063	$118	$840	7.1
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	589	2,063	$118	$840	7.1
1888	100.0%	HP	RHEEM	RPNC042J000	42,000	Office - Trailer	1735	589	2,063	$118	$840	7.1
1888	100.0%	HP	RHEEM	RPNC058J000	56,000	Office - Trailer	1735	589	2,750	$157	$840	5.4
1888	100.0%	HP	RHEEM	RPNC058J000	56,000	Office - Trailer	1735	589	2,750	$157	$840	5.4
1888	100.0%	HP	RHEEM	RPNC058J000	56,000	Office - Trailer	1735	589	2,750	$157	$840	5.4
1888	100.0%	HP	RHEEM	RPND018J	18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1888	100.0%	HP	RHEEM	RPND018J000	18,000	Office - Trailer	1735	589	884	$50	$840	16.7
1888	100.0%	HP	RHEEM	RPND030J000	30,200	Office - Trailer	1735	589	1,483	$85	$840	9.9
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	589	2,014	$115	$840	7.3
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	589	2,014	$115	$840	7.3
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	589	2,014	$115	$840	7.3
1889	100.0%	HP	CARRIER	50NQ042310	41,000	Office - Trailer	1735	589	2,014	$115	$840	7.3
1889	100.0%	HP	CARRIER	50NQO42310	41,000	Office - Trailer	1735	589	2,014	$115	$840	7.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654AN048	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANO48	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP	654ANO48	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
			CO.)									
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANO48	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANO60	58,500	Office - Trailer	1735	589	2,873	$164	$840	5.1
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEG	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEG	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEG	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	654ANX048000AEQ	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	65AN048	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	65AN048	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1889	100.0%	HP	DAY & NIGHT (BDP CO.)	65ANO48	48,000	Office - Trailer	1735	589	2,357	$134	$840	6.3
1925	100.0%	HP	TEMPSTAR	PHAD60N1K3	57,000	Office - Trailer	1735	589	2,799	$160	$840	5.3
1925	100.0%	R	INTERTHERM, INC	SUH36I79MY23T02	36,000	Office - Trailer	1735	646	1,937	$110	$840	7.6
1925	100.0%	R	INTERTHERM, INC	SUH36I79MY23T02	36,000	Office - Trailer	1735	646	1,937	$110	$840	7.6
1925	100.0%	R	INTERTHERM, INC	SUH36I79MY23T02	36,000	Office - Trailer	1735	646	1,937	$110	$840	7.6
1927	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
1927	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
1927	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
194A	0.0%	HP	TRANE	BWC030C100CA	30,200	shop/Lab	1602	660	1,662	$95	$840	8.9
211	100.0%	R	CARRIER	48SS024040321AA	24,000	Office - Modular	3725	538	1,077	$61	$840	13.7
211	100.0%	R	CARRIER	48SS036060531AA	36,000	Office - Modular	3725	538	1,615	$92	$840	9.1
211	100.0%	R	CARRIER	48SS036060531AA	36,000	Office - Modular	3725	538	1,615	$92	$840	9.1
211	100.0%	R	CARRIER	48SS042060531AA	42,500	Office - Modular	3725	538	1,907	$109	$840	7.7
211	100.0%	R	CARRIER	48SS042060531AA	42,500	Office - Modular	3725	538	1,907	$109	$840	7.7
211	100.0%	R	CARRIER	48SS048080541AA	47,000	Office - Modular	3725	538	2,109	$120	$840	7.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
211	100.0%	R	CARRIER	48SS048080541AA	47,000	Office - Modular	3725	538	2,109	$120	$840	7.0
211	100.0%	R	CARRIER	48SS048080541AA	47,000	Office - Modular	3725	538	2,109	$120	$840	7.0
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	538	2,670	$152	$840	5.5
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	538	2,670	$152	$840	5.5
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	538	2,670	$152	$840	5.5
211	100.0%	R	CARRIER	48SS060080531AA	59,500	Office - Modular	3725	538	2,670	$152	$840	5.5
2127	100.0%	HP	MARVAIR	AVP48HPA-10CS H93CI	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
2127	100.0%	HP	MARVAIR	AVP48HPA-10CS H93CI	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
2128	0.0%	R	INTERTHERM, INC	AWY036KCRAB10	35,000	Office - Modular	3725	933	2,723	$155	$840	5.4
2128	0.0%	R	INTERTHERM, INC	AWY036KCRAB10	35,000	Office - Modular	3725	933	2,723	$155	$840	5.4
2177	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
2177	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
2177	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
2180	0.0%	HP	INTERTHERM, INC	AWYB-024KB10-01	24,000	Office - Trailer	1735	1318	2,636	$150	$840	5.6
2180	0.0%	R	MARVAIR		24,000	Office - Trailer	1735	1517	3,035	$173	$840	4.9
2180	0.0%	R	MARVAIR		24,000	Office - Trailer	1735	1517	3,035	$173	$840	4.9
2180	0.0%	R	MARVAIR		24,000	Office - Trailer	1735	1517	3,035	$173	$840	4.9
2525	0.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	1517	4,425	$252	$840	3.3
2525	0.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	1517	4,425	$252	$840	3.3
2525	0.0%	R	BARD	36WA4	35,000	Office - Trailer	1735	1517	4,425	$252	$840	3.3
2554	0.0%	HP	BARD	30WH1	29,600	Office - Modular	3725	736	1,815	$103	$840	8.1
2580	0.0%	HP	CARRIER	50PQO12510AA	120,000	Communications /computer	5976	504	5,040	$287	$840	2.9
2580	0.0%	HP	CARRIER	50QOCO8510	90,000	Communications /computer	5976	504	3,780	$215	$840	3.9
2580	0.0%	HP	CARRIER	50YQO48410	48,000	Communications /computer	5976	504	2,016	$115	$840	7.3
2627	0.0%	R	BARD	24WA5	24,000	classroom/confer ence	2627	1085	2,169	$124	$840	6.8
2627	0.0%	R	BARD	24WA5	24,000	classroom/confer ence	2627	1085	2,169	$124	$840	6.8

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2627	0.0%	R	MARVAIR	AVP24ACA-08NF-G86BO	24,000	classroom/conference	2627	1085	2,169	$124	$840	6.8
2627	0.0%	R	MARVAIR	AVP24ACA-08NF-G86BO	24,000	classroom/conference	2627	1085	2,169	$124	$840	6.8
2679	18.2%	HP	BARD	WH361-AOSXX4XXX	35,600	Office - Trailer	1735	1186	3,517	$200	$840	4.2
2679	18.2%	HP	BARD	WH361-AOSXX4XXX	35,600	Office - Trailer	1735	1186	3,517	$200	$840	4.2
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	1186	3,478	$198	$840	4.2
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	1186	3,478	$198	$840	4.2
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	1186	3,478	$198	$840	4.2
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	1186	3,478	$198	$840	4.2
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	1186	3,478	$198	$840	4.2
2679	18.2%	HP	MARVAIR	AVP36HPA05N1000BI06906	35,200	Office - Trailer	1735	1186	3,478	$198	$840	4.2
2679	18.2%	HP	MARVAIR	AVP36HPAD5N1000BI	35,200	Office - Trailer	1735	1186	3,478	$198	$840	4.2
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6
2679	18.2%	R	BARD	36WA3	36,000	Office - Trailer	1735	1359	4,076	$232	$840	3.6

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2679	18.2%	R	GENERAL ELECTRIC	TC24FN51	24,000	Office - Trailer	1735	1359	2,718	$155	$840	5.4
2684	37.5%	HP	BARD		24,000	Office - Trailer	1735	1045	2,090	$119	$840	7.1
2684	37.5%	HP	BARD	WH316A10XX4	35,400	Office - Trailer	1735	1045	3,082	$176	$840	4.8
2684	37.5%	HP	MARVAIR	AUP36HPA05N1000 CI	35,200	Office - Trailer	1735	1045	3,065	$175	$840	4.8
2684	37.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	1045	3,065	$175	$840	4.8
2684	37.5%	HP	UNKNOWN		24,000	Office - Trailer	1735	1045	2,090	$119	$840	7.1
2684	37.5%	R	BARD	30WA	30,000	Office - Trailer	1735	1190	2,976	$170	$840	5.0
2684	37.5%	R	BARD	30WA	30,000	Office - Trailer	1735	1190	2,976	$170	$840	5.0
2684	37.5%	R	BARD	30WA	30,000	Office - Trailer	1735	1190	2,976	$170	$840	5.0
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	1190	3,571	$204	$840	4.1
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	1190	3,571	$204	$840	4.1
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	1190	3,571	$204	$840	4.1
2684	37.5%	R	BARD	36WA1	36,000	Office - Trailer	1735	1190	3,571	$204	$840	4.1
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	954	1,907	$109	$840	7.7
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	954	1,907	$109	$840	7.7
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	954	1,907	$109	$840	7.7
2685	50.0%	HP	MARVAIR		24,000	Office - Trailer	1735	954	1,907	$109	$840	7.7
2685	50.0%	HP	MARVAIR	AVP26H24	22,600	Office - Trailer	1735	954	1,796	$102	$840	8.2
2685	50.0%	HP	MARVAIR	AVP36HPA10N	35,200	Office - Trailer	1735	954	2,797	$159	$840	5.3
2685	50.0%	R	TRANE	BCW724A10EA0		Office - Trailer	1735	1082	0	$0	$0	
2687	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
2687	0.0%	HP	MARVAIR		36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
2687	0.0%	HP	MARVAIR		36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
2701	100.0%	R	BARD	36WAI	36,000	Locker/Exercise	2701	0	0	$0	$0	
2726	100.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	446	1,314	$75	$840	11.2
2726	100.0%	HP	BARD	WH361A05	35,600	Office - Modular	3725	446	1,322	$75	$840	11.1
2726	100.0%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Modular	3725	446	1,307	$74	$840	11.3
2727	75.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	772	2,289	$130	$840	6.4

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2727	75.0%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
2727	75.0%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
2727	75.0%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
2727	75.0%	HP	MARVAIR	AVP36HPA10N-2000BI	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
2727	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
2727	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
2727	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
2727	75.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
2728	0.0%	HP	BARD	36WH2	35,400	shop/Lab	1602	660	1,948	$111	$840	7.6
2728	0.0%	HP	BARD	36WH2	35,400	shop/Lab	1602	660	1,948	$111	$840	7.6
2728	0.0%	HP	BARD	36WH2	35,400	shop/Lab	1602	660	1,948	$111	$840	7.6
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	1058	3,173	$181	$840	4.6
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	1058	3,173	$181	$840	4.6
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	1058	3,173	$181	$840	4.6
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	1058	3,173	$181	$840	4.6
2775	35.7%	HP	BARD		36,000	Office - Trailer	1735	1058	3,173	$181	$840	4.6
2775	35.7%	HP	BARD	36WA3	36,000	Office - Trailer	1735	1058	3,173	$181	$840	4.6
2775	35.7%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1058	3,103	$177	$840	4.7
2775	35.7%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1058	3,103	$177	$840	4.7
2775	35.7%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	1058	3,103	$177	$840	4.7
2775	35.7%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	1058	3,103	$177	$840	4.7
2775	35.7%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	1058	3,103	$177	$840	4.7
2775	35.7%	HP	MARVAIR	AVP36HPA05N13000 BI	35,200	Office - Trailer	1735	1058	3,103	$177	$840	4.7
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	BARD	36WA3	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	LUXAIRE	BBHP-FQ24AA	36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	N/A		36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2775	35.7%	R	UNKNOWN		36,000	Office - Trailer	1735	1206	3,618	$206	$840	4.1
2777	100.0%	HP	BARD	24WH2	22,600	classroom/conference	2627	444	836	$48	$840	17.6
2777	100.0%	HP	MARVAIR	AVP36HPA05N-1000BI	35,200	classroom/conference	2627	444	1,302	$74	$840	11.3
2777	100.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	classroom/conference	2627	444	1,302	$74	$840	11.3
2787	0.0%	HP	MARVAIR	AVP36HPA00N-1000	35,200	Locker/Exercise	2701	0	0	$0	$0	
2787	0.0%	R	BARD	WA361A10CCL	36,000	Locker/Exercise	2701	0	0	$0	$0	
2787	0.0%	R	MARVAIR		36,000	Locker/Exercise	2701	0	0	$0	$0	
2801	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
2801	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
2801	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
2802	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
2802	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
2802	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
2804	0.0%	R	BARD	A48WA2	47,000	Office - Trailer	1735	1517	5,943	$339	$840	2.5
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
2825	0.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
2825	0.0%	HP	TRANE	WSC036A3R0A0100 0000000000A	36,000	Office - Modular	3725	736	2,207	$126	$840	6.7
2925	100.0%	HP	CARRIER	50YQ060300	58,000	Office - Modular	3725	446	2,153	$123	$840	6.8
2925	100.0%	HP	CARRIER	50YQ060300	58,000	Office - Modular	3725	446	2,153	$123	$840	6.8
2925	100.0%	HP	TEMPSTAR	PHAD60NK30	57,000	Office - Modular	3725	446	2,116	$121	$840	7.0
3180	0.0%	HP	BARD	36WH	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
3180	0.0%	HP	BARD	36WH	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
3180	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
3180	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
3180	0.0%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
3180	0.0%	HP	MARVAIR	AVP36HPA10N1000 CI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
3203	33.3%	HP	BARD	36WHI	36,000	shop/Lab	1602	540	1,620	$92	$840	9.1
3203	33.3%	HP	BARD	36WHI	36,000	shop/Lab	1602	540	1,620	$92	$840	9.1
3204	0.0%	R	BARD	36WA1	36,000	shop/Lab	1602	535	1,606	$92	$840	9.2
3204	0.0%	R	BARD	36WA1	36,000	shop/Lab	1602	535	1,606	$92	$840	9.2
3226	0.0%	HP	CARRIER	50YQ036300	36,000	Office - Modular	3725	736	2,207	$126	$840	6.7
3226	0.0%	HP	CARRIER	50YQ036300	36,000	Office - Modular	3725	736	2,207	$126	$840	6.7
3226	0.0%	HP	CARRIER	50YQ036300	36,000	Office - Modular	3725	736	2,207	$126	$840	6.7
3226	0.0%	HP	TRANE	WCY036F100AC	35,600	Office - Modular	3725	736	2,183	$124	$840	6.8
3226	0.0%	HP	TRANE	WCY036F100AC	35,600	Office - Modular	3725	736	2,183	$124	$840	6.8
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92 A1	42,500	Office - Modular	3725	446	1,578	$90	$840	9.3
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92 A1	42,500	Office - Modular	3725	446	1,578	$90	$840	9.3
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92 A1	42,500	Office - Modular	3725	446	1,578	$90	$840	9.3
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92 A1	42,500	Office - Modular	3725	446	1,578	$90	$840	9.3
3427	100.0%	HP	MARVAIR	AVP42HPA10COM92 A1	42,500	Office - Modular	3725	446	1,578	$90	$840	9.3
3520	33.3%	HP	MARVAIR	AVP20HPA04N1000	20,140	Office - Trailer	1735	1075	1,804	$103	$840	8.2

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
				BI06883								
3520	33.3%	HP	MARVAIR	AVP36HPC09N1000 BI06911	35,680	Office - Trailer	1735	1075	3,197	$182	$840	4.6
3520	33.3%	R	BARD	24WA	23,000	Office - Trailer	1735	1227	2,351	$134	$840	6.3
3520	33.3%	R	BARD	24WA	23,000	Office - Trailer	1735	1227	2,351	$134	$840	6.3
3520	33.3%	R	BARD	24WA	24,000	Office - Trailer	1735	1227	2,454	$140	$840	6.0
3520	33.3%	R	BARD	30WA	30,000	Office - Trailer	1735	1227	3,067	$175	$840	4.8
3520	33.3%	R	BARD	30WA1	30,000	Office - Trailer	1735	1227	3,067	$175	$840	4.8
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	BARD	36 WA1	36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	MARVAIR		36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	UNKNOWN		36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3520	33.3%	R	UNKNOWN		36,000	Office - Trailer	1735	1227	3,680	$210	$840	4.0
3526	0.0%	HP	MARVAIR	AVP36MP	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
3526	0.0%	HP	MARVAIR	AVP36MP	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
3526	0.0%	HP	MARVAIR	AVP36MP	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	HP	BARD	NO ID PLATE	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3527	100.0%	R	CARRIER	38YH048310	36,000	Office - Modular	3725	538	1,615	$92	$840	9.1
3527	100.0%	R	CARRIER	40QHS048	48,000	Office - Modular	3725	538	2,154	$123	$840	6.8
3555	0.0%	R	BARD	30WA1	30,000	Office - Trailer	1735	1517	3,793	$216	$840	3.9
3577	50.0%	HP	B-D-P		36,000	Office - Trailer	1735	954	2,861	$163	$840	5.2
3577	50.0%	HP	DAY & NIGHT (BDP CO.)		36,000	Office - Trailer	1735	954	2,861	$163	$840	5.2
3577	50.0%	HP	DAY & NIGHT (BDP CO.)	542D037HP	38,000	Office - Trailer	1735	954	3,020	$172	$840	4.9
3577	50.0%	HP	PAYNE		36,000	Office - Trailer	1735	954	2,861	$163	$840	5.2
3577	50.0%	HP	TRANE	WCY036F100AC	35,600	Office - Trailer	1735	954	2,829	$161	$840	5.2
3703	0.0%	HP	BARD	WH361B09XX4	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
3703	0.0%	HP	MARVAIR	AVP48HPC09N-1000 CI	47,000	Office - Trailer	1735	1318	5,162	$294	$840	2.9
3703	0.0%	R	BARD	24WA	23,000	Office - Trailer	1735	1517	2,908	$166	$840	5.1
3703	0.0%	R	BARD	24WA	23,000	Office - Trailer	1735	1517	2,908	$166	$840	5.1
3703	0.0%	R	BARD	24WA	23,000	Office - Trailer	1735	1517	2,908	$166	$840	5.1
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1517	3,793	$216	$840	3.9
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1517	3,793	$216	$840	3.9
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1517	3,793	$216	$840	3.9
3703	0.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1517	3,793	$216	$840	3.9
3703	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
3703	0.0%	R	BARD	P24A1	23,000	Office - Trailer	1735	1517	2,908	$166	$840	5.1
3703	0.0%	R	BARD	P36A1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
3703	0.0%	R	BARD	P36A1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
3703	0.0%	R	BARD	P76A1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
3724	100.0%	R	BARD	P48A5-3	48,000	Office - Modular	3725	538	2,154	$123	$840	6.8
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3724	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	CARRIER		36,000	Office - Modular	3725	538	1,615	$92	$840	9.1
3725	100.0%	R	CARRIER		36,000	Office - Modular	3725	538	1,615	$92	$840	9.1
3725	100.0%	R	TRANE	SACB-C156-A	48,000	Office - Modular	3725	538	2,154	$123	$840	6.8
3725	100.0%	R	TRANE	TCC024F100B2	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100B2	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	24,000	Office - Modular	3725	538	1,077	$61	$840	13.7
3725	100.0%	R	TRANE	TCC024F100BD	24,000	Office - Modular	3725	538	1,077	$61	$840	13.7
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3725	100.0%	R	TRANE	TCC204F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	HP	BARD		36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0
3726	100.0%	R	TRANE	TCC024F100BD	23,400	Office - Modular	3725	538	1,050	$60	$840	14.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
3751	33.3%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1075	3,172	$181	$840	4.6
3751	33.3%	HP	MARVAIR	AVP36HPA5N1000BI	35,200	Office - Trailer	1735	1075	3,154	$180	$840	4.7
3751	33.3%	R	BARD	36WA4	35,000	Office - Trailer	1735	1227	3,578	$204	$840	4.1
376	0.0%	R	BARD	36WA3	36,000	shop/Lab	1602	535	1,606	$92	$840	9.2
376	0.0%	R	BARD	48WA3	47,000	shop/Lab	1602	535	2,096	$119	$840	7.0
3775	0.0%	HP	MARVAIR	AVP36HPA05NFF86 A0	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
3775	0.0%	HP	MARVAIR	AVP36HPA05NFF86 A0	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
3777	0.0%	R	WALL-KING	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
379	0.0%	HP	BARD	36WH23	35,400	shop/Lab	1602	660	1,948	$111	$840	7.6
379	0.0%	HP	BARD	36WH23	35,400	shop/Lab	1602	660	1,948	$111	$840	7.6
379	0.0%	HP	BARD	36WH23	35,400	shop/Lab	1602	660	1,948	$111	$840	7.6
379	0.0%	HP	BARD	48WH23	48,500	shop/Lab	1602	660	2,669	$152	$840	5.5
382	0.0%	HP	WESTINGHOUSE	UB022-BW	23,000	shop/Lab	1602	660	1,266	$72	$840	11.6
3925	0.0%	R	BARD	30WA1	30,000	classroom/conference	2627	1085	2,711	$155	$840	5.4
3925	0.0%	R	BARD	30WA1	30,000	classroom/conference	2627	1085	2,711	$155	$840	5.4
3925	0.0%	R	BARD	30WA1	30,000	classroom/conference	2627	1085	2,711	$155	$840	5.4
4107	100.0%	R	MARVAIR	AVP20ACA-03NH87	18,600	storage	1886	447	693	$39	$840	21.3
4128	0.0%	HP	MARVAIR	AVP36HPA05N-1000GI	35,200	Food	4128	523	1,534	$87	$840	9.6
4161	100.0%	R	BARD	48WA3	47,000	Office - Trailer	1735	646	2,529	$144	$840	5.8

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4161	100.0%	R	MARVAIR	48WA3	47,000	Office - Trailer	1735	646	2,529	$144	$840	5.8
4180	20.0%	HP	BARD	30WHI	28,500	Office - Trailer	1735	1172	2,784	$159	$840	5.3
4180	20.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1172	3,517	$200	$840	4.2
4180	20.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1172	3,517	$200	$840	4.2
4180	20.0%	HP	BARD	WH36A05XX4XXX	35,600	Office - Trailer	1735	1172	3,478	$198	$840	4.2
4180	20.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	1172	3,439	$196	$840	4.3
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4182	100.0%	HP	MARVAIR	AVP36HPA05N1000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4182	100.0%	HP	MARVAIR	WH361A05	35,600	Office - Trailer	1735	589	1,748	$100	$840	8.4
4182	100.0%	HP	MARVAIR	WH361A05	35,600	Office - Trailer	1735	589	1,748	$100	$840	8.4
4184	0.0%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
4184	0.0%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
4184	0.0%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
4184	0.0%	HP	BARD	36WH7-A050	35,000	Office - Trailer	1735	1318	3,844	$219	$840	3.8
4184	0.0%	R	MARVAIR		48,000	Office - Trailer	1735	1517	6,069	$346	$840	2.4
4302	50.0%	HP	BARD	WH361R05	35,600	Office - Trailer	1735	954	2,829	$161	$840	5.2
4302	50.0%	HP	CARRIER	WCC024F100BG	23,800	Office - Trailer	1735	954	1,891	$108	$840	7.8
4302	50.0%	HP	CARRIER	WCC024F100BG	23,800	Office - Trailer	1735	954	1,891	$108	$840	7.8
4302	50.0%	HP	MARVAIR	AVP24HPA04N-1000BI	22,600	Office - Trailer	1735	954	1,796	$102	$840	8.2
4302	50.0%	HP	MARVAIR	AVP36HPA05N-1000 B1 06906	35,200	Office - Trailer	1735	954	2,797	$159	$840	5.3
4302	50.0%	R	BARD	18WA	16,500	Office - Trailer	1735	1082	1,487	$85	$840	9.9

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4302	50.0%	R	BARD	18WA	16,500	Office - Trailer	1735	1082	1,487	$85	$840	9.9
4302	50.0%	R	BARD	18WA	17,500	Office - Trailer	1735	1082	1,577	$90	$840	9.3
4302	50.0%	R	BARD	1BWM2	36,000	Office - Trailer	1735	1082	3,245	$185	$840	4.5
4302	50.0%	R	BARD	24WA	23,000	Office - Trailer	1735	1082	2,073	$118	$840	7.1
4302	50.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1082	2,704	$154	$840	5.5
4302	50.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1082	3,245	$185	$840	4.5
4302	50.0%	R	TRANE	BUSC5A	36,000	Office - Trailer	1735	1082	3,245	$185	$840	4.5
4325	0.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4325	0.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4325	0.0%	R	BARD	36WA3	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4377	75.0%	HP	BARD	WH361895	35,600	Office - Trailer	1735	772	2,289	$130	$840	6.4
4377	75.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
4377	75.0%	HP	MARVAIR	AVP36HPA05N1000 B1	35,200	Office - Trailer	1735	772	2,263	$129	$840	6.5
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
4377	75.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	864	2,591	$148	$840	5.7
4378	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N1000	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
4378	0.0%	HP	MARVAIR	AVP36HPA05N-	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
				1000CI								
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4378	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4378	0.0%	R	UNKNOWN		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4378	0.0%	R	UNKNOWN		36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4383	100.0%	HP	BARD	WH361AD5	35,600	Office - Trailer	1735	589	1,748	$100	$840	8.4
4383	100.0%	HP	MARVAIR	36WA1	36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
4383	100.0%	HP	MARVAIR	AVP36HP05N1000B1	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4383	100.0%	HP	MARVAIR	AVP36HPA05N-1000	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4383	100.0%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4383	100.0%	HP	MARVAIR	AVP36HPA1ON-2000BI	35,200	Office - Trailer	1735	589	1,729	$99	$840	8.5
4383	100.0%	HP	MARVAIR	F/02770-1000 CI CI AVP36HPA05N-1000	36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
4383	100.0%	HP	UNKNOWN	WH361ADS	36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1075	3,225	$184	$840	4.6
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1075	3,225	$184	$840	4.6
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1075	3,225	$184	$840	4.6
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1075	3,225	$184	$840	4.6
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1075	3,225	$184	$840	4.6
4385	33.3%	HP	BARD	36WH1	36,000	Office - Trailer	1735	1075	3,225	$184	$840	4.6
4387	20.0%	HP	MARVAIR	AVP30HPA05N-1000	30,000	Office - Trailer	1735	1172	2,931	$167	$840	5.0
4387	20.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	1172	3,439	$196	$840	4.3
4387	20.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	1172	3,439	$196	$840	4.3
4387	20.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	1172	3,439	$196	$840	4.3

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4387	20.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	1172	3,439	$196	$840	4.3
4387	20.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1343	3,357	$191	$840	4.4
4387	20.0%	R	BARD	30WA	30,000	Office - Trailer	1735	1343	3,357	$191	$840	4.4
4406	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4406	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4406	0.0%	R	BARD	36WA1	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
4406	0.0%	R	CARRIER	50YH030300	29,000	Office - Trailer	1735	1517	3,667	$209	$840	4.0
4442	0.0%	HP	BARD	WH361A05XX4XXX	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
4442	0.0%	R	WALL-KING	PWY036BAVAA10	35,200	Office - Trailer	1735	1517	4,451	$254	$840	3.3
4475	0.0%	HP	BDP-PAYNE	542EP060	60,000	shop/Lab	1602	660	3,302	$188	$840	4.5
4475	0.0%	HP	BDP-PAYNE	542EP060	60,000	shop/Lab	1602	660	3,302	$188	$840	4.5
4525	75.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	518	1,528	$87	$840	9.6
4525	75.0%	HP	BDP-PAYNE	542EP036	35,400	Office - Modular	3725	518	1,528	$87	$840	9.6
4525	75.0%	HP	BDP-PAYNE	542EP042	40,000	Office - Modular	3725	518	1,727	$98	$840	8.5
4525	75.0%	HP	BDP-PAYNE	542EP042	40,000	Office - Modular	3725	518	1,727	$98	$840	8.5
4525	75.0%	HP	BDP-PAYNE	542EP042	40,000	Office - Modular	3725	518	1,727	$98	$840	8.5
4525	75.0%	R			36,000	Office - Modular	3725	637	1,912	$109	$840	7.7
4576	100.0%	HP	BARD	36WH7-B09C	35,000	Communications /computer	5976	274	799	$46	$840	18.4
4675	30.0%	HP			36,000	Food	4128	405	1,214	$69	$840	12.1
4675	30.0%	HP			36,000	Food	4128	405	1,214	$69	$840	12.1
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	405	1,214	$69	$840	12.1
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	405	1,214	$69	$840	12.1

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	405	1,214	$69	$840	12.1
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	405	1,214	$69	$840	12.1
4675	30.0%	HP	BARD	36WH1	36,000	Food	4128	405	1,214	$69	$840	12.1
4675	30.0%	HP	BARD	48WH6A10C	48,000	Food	4128	405	1,619	$92	$840	9.1
4675	30.0%	HP	BARD	48WH6A10C	48,000	Food	4128	405	1,619	$92	$840	9.1
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	405	1,194	$68	$840	12.3
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	405	1,194	$68	$840	12.3
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	405	1,194	$68	$840	12.3
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	405	1,194	$68	$840	12.3
4675	30.0%	HP	CARRIER	542EOP036000AAAE	35,400	Food	4128	405	1,194	$68	$840	12.3
4675	30.0%	HP	CARRIER	542EOPO36000AAAE	35,400	Food	4128	405	1,194	$68	$840	12.3
4675	30.0%	HP	MARVAIR	AVP36HPA05N-1000B1	35,200	Food	4128	405	1,187	$68	$840	12.4
4675	30.0%	HP	RUUD AIR CONDITIONERS	VPDC075CK	93,000	Food	4128	405	3,137	$179	$840	4.7
4675	30.0%	HP	TEMPSTAR	PHF048H000A	48,000	Food	4128	405	1,619	$92	$840	9.1
4675	30.0%	HP	UNKNOWN	HVE36H-1-056	36,000	Food	4128	405	1,214	$69	$840	12.1
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	526	5,260	$300	$840	2.8
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	526	5,260	$300	$840	2.8
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	526	5,260	$300	$840	2.8
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	526	5,260	$300	$840	2.8
4725	0.0%	R	POMONA AIR	WC20002404066	120,000	Communications /computer	5976	526	5,260	$300	$840	2.8
473	0.0%	HP	CARRIER	50NQ-036-310	35,400	storage	1886	810	2,388	$136	$840	6.2
501	100.0%	HP	BARD	WH181AO8XX4XXX	19,000	Office - Modular	3725	446	705	$40	$840	20.9
5104	100.0%	HP	MARVAIR	AVP30HPA05N-1000B1	30,000	Office - Trailer	1735	589	1,473	$84	$840	10.0
5105	0.0%	HP	CARRIER	51FYF318351	72,000	Office - Trailer	1735	1318	7,908	$451	$840	1.9
5125	0.0%	HP	MARVAIR	AVP201PA04N-1000B1	20,000	Office - Trailer	1735	1318	2,197	$125	$840	6.7

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5125	0.0%	HP	MARVAIR	AVP20HPA04N1000 B1	20,000	Office - Trailer	1735	1318	2,197	$125	$840	6.7
5125	0.0%	HP	MARVAIR	AVP30HPA05N-1000 B1	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5
5125	0.0%	HP	WESTINGHOUSE	UB022KBW	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5
5125	0.0%	HP	WESTINGHOUSE	UB030KBW	30,000	Office - Trailer	1735	1318	3,295	$188	$840	4.5
5207	100.0%	HP	BARD		18,000	storage	1886	445	667	$38	$840	22.1
5225	25.0%	HP	BARD	36WHI	36,000	Office - Trailer	1735	1136	3,408	$194	$840	4.3
5225	25.0%	HP	BARD	WH361005X	35,600	Office - Trailer	1735	1136	3,370	$192	$840	4.4
5225	25.0%	HP	MARVAIR	AVP36HPA05N	35,200	Office - Trailer	1735	1136	3,332	$190	$840	4.4
5226	75.0%	HP	BARD	36WH2	35,400	Office - Trailer	1735	772	2,276	$130	$840	6.5
5226	75.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	772	2,289	$130	$840	6.4
5226	75.0%	HP	BARD	WH361R00	35,600	Office - Trailer	1735	772	2,289	$130	$840	6.4
5226	75.0%	HP	MARVAIR	AVP30HPA05N1000 BI	30,000	Office - Trailer	1735	772	1,929	$110	$840	7.6
5226	75.0%	HP	MARVAIR	AVP30HPA05N1000 BI	30,000	Office - Trailer	1735	772	1,929	$110	$840	7.6
5226	75.0%	R	BARD	30WA	30,000	Office - Trailer	1735	864	2,159	$123	$840	6.8
5226	75.0%	R	BARD	30WA	30,000	Office - Trailer	1735	864	2,159	$123	$840	6.8
531	0.0%	R	CARRIER	28CX1636F1112N	240,000	shop/Lab	1602	535	10,704	$610	$840	1.4
531	0.0%	R	CARRIER	28CX1636FB1112M	240,000	shop/Lab	1602	535	10,704	$610	$840	1.4
5425	0.0%	HP	BARD	WH361A00	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
5425	0.0%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
5425	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
5425	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
5425	0.0%	HP	MARVAIR	AVP36HP05H100B1	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
5425	0.0%	HP	MARVAIR	AVP36HP05N100B	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
5425	0.0%	HP	MARVAIR	AVP36HP05N100B1	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5425	0.0%	HP	MARVAIR	AVP36HPA05N1000 BI06906	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
5425	0.0%	HP	MARVAIR	AVP36HPA05N1000 BI06906	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
5425	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	Office - Trailer	1735	987	2,895	$165	$840	5.1
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5426	45.5%	R	BARD	36WAI	36,000	Office - Trailer	1735	1121	3,363	$192	$840	4.4
5475	0.0%	HP	CARRIER	50HJQ005-521	46,000	Office - Modular	3725	736	2,820	$161	$840	5.2
5475	0.0%	HP	CARRIER	50HJQ006501	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5475	0.0%	HP	CARRIER	50HJQ006501	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
5475	0.0%	HP	CARRIER	50HJQ006501	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
5475	0.0%	HP	CARRIER	50HS060501AA	57,500	Office - Modular	3725	736	3,525	$201	$840	4.2
5475	0.0%	HP	CARRIER	50HS060501AA	57,500	Office - Modular	3725	736	3,525	$201	$840	4.2
5475	0.0%	HP	LUXAIRE	BATHF024AB	24,000	Office - Modular	3725	736	1,471	$84	$840	10.0
5475	0.0%	HP	PAYNE	542EP042	40,000	Office - Modular	3725	736	2,452	$140	$840	6.0
5475	0.0%	HP	PAYNE	542EP042	40,000	Office - Modular	3725	736	2,452	$140	$840	6.0
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	736	2,881	$164	$840	5.1
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	736	2,881	$164	$840	5.1
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	736	2,881	$164	$840	5.1
5475	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	736	2,881	$164	$840	5.1
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	736	3,556	$203	$840	4.1
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	736	3,556	$203	$840	4.1
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	736	3,556	$203	$840	4.1
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	736	3,556	$203	$840	4.1
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	736	3,556	$203	$840	4.1
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	736	3,556	$203	$840	4.1
5475	0.0%	HP	PAYNE	542EP060	58,000	Office - Modular	3725	736	3,556	$203	$840	4.1
5475	0.0%	HP	TRANE	WSC048A3R0A01	48,000	Office - Modular	3725	736	2,943	$168	$840	5.0
5475	0.0%	HP	TRANE	WSC060A3R0A	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
5475	0.0%	HP	TRANE	WSC060A3R0A	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
5475	0.0%	HP	TRANE	WSC060A3R0A	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
5475	0.0%	HP	TRANE	WSC060A3R0A01	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
5475	0.0%	HP	TRANE	WSC060A3REA01	60,000	Office - Modular	3725	736	3,678	$210	$840	4.0
5475	0.0%	R	LENNOX		36,000	Office - Modular	3725	933	2,800	$160	$840	5.3
5475	0.0%	R	PAYNE	559E5024	24,600	Office - Modular	3725	933	1,914	$109	$840	7.7
5475	0.0%	R	PAYNE	55EJ024	24,600	Office - Modular	3725	933	1,914	$109	$840	7.7
5475	0.0%	R	TRANE		36,000	Office - Modular	3725	933	2,800	$160	$840	5.3
5475	0.0%	R	TRANE	BTC090C300FO	92,000	Office - Modular	3725	933	7,157	$408	$840	2.1

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5475	0.0%	R	UNKNOWN		36,000	Office - Modular	3725	933	2,800	$160	$840	5.3
5626	40.0%	HP	BARD	24WHI	23,000	Office - Modular	3725	620	1,188	$68	$840	12.4
5626	40.0%	HP	BARD	24WHI	23,000	Office - Modular	3725	620	1,188	$68	$840	12.4
5626	40.0%	HP	BARD	24WHI	23,000	Office - Modular	3725	620	1,188	$68	$840	12.4
5626	40.0%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	775	2,714	$155	$840	5.4
5626	40.0%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	775	2,714	$155	$840	5.4
5626	40.0%	R	CARRIER	40FS160310	36,000	Office - Modular	3725	775	2,326	$133	$840	6.3
5626	40.0%	R	CARRIER	40FS200310	36,000	Office - Modular	3725	775	2,326	$133	$840	6.3
5627	14.3%	R	AMERICAN STANDARD	YCC036F3HOBC	36,000	Office - Modular	3725	877	2,631	$150	$840	5.6
5627	14.3%	R	AMERICAN STANDARD	YCC036F3HOBC	36,000	Office - Modular	3725	877	2,631	$150	$840	5.6
5627	14.3%	R	AMERICAN STANDARD	YCC036F3MOBC	36,000	Office - Modular	3725	877	2,631	$150	$840	5.6
5627	14.3%	R	AMERICAN STANDARD	YCC036F3MOBC	36,000	Office - Modular	3725	877	2,631	$150	$840	5.6
5627	14.3%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	877	3,070	$175	$840	4.8
5627	14.3%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	877	3,070	$175	$840	4.8
5627	14.3%	R	AMERICAN STANDARD	YCC042F3MOBC	42,000	Office - Modular	3725	877	3,070	$175	$840	4.8
5627	14.3%	R	CARRIER	48DL003	80,000	Office - Modular	3725	877	5,847	$333	$840	2.5
5627	14.3%	R	CARRIER	48DL045	100,000	Office - Modular	3725	877	7,309	$417	$840	2.0
571	92.3%	HP	B-D-P	559EE060	57,500	Office - Modular	3725	468	2,242	$128	$840	6.6
571	92.3%	HP	CARRIER	50TJQ004-M-6012C	36,000	Office - Modular	3725	468	1,404	$80	$840	10.5
571	92.3%	HP	CARRIER	50TJQ004-M-601ZC	36,000	Office - Modular	3725	468	1,404	$80	$840	10.5
571	92.3%	HP	CARRIER	50TJQ005-M-6012C	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005M611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ005-M-611ZC	48,000	Office - Modular	3725	468	1,871	$107	$840	7.9
571	92.3%	HP	CARRIER	50TJQ006-M-601ZC	60,000	Office - Modular	3725	468	2,339	$133	$840	6.3
571	92.3%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	468	2,807	$160	$840	5.2

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
571	92.3%	R	CARRIER	50TJ1005-M-611ZC	47,000	Office - Modular	3725	569	2,228	$127	$840	6.6
5974	0.0%	HP	BARD	30HW1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
5974	0.0%	HP	BARD	30WH1	29,600	Office - Trailer	1735	1318	3,251	$185	$840	4.5
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1110	3,274	$187	$840	4.5
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1110	3,274	$187	$840	4.5
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1110	3,274	$187	$840	4.5
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1110	3,274	$187	$840	4.5
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1110	3,274	$187	$840	4.5
5975	28.6%	HP	BARD	36WH2	35,400	Office - Trailer	1735	1110	3,274	$187	$840	4.5
5975	28.6%	HP	BARD	38WH2	36,000	Office - Trailer	1735	1110	3,329	$190	$840	4.4
5975	28.6%	HP	MARVAIR	AVP36HPA050N-1000	35,200	Office - Trailer	1735	1110	3,255	$186	$840	4.5
5975	28.6%	HP	UNKNOWN		36,000	Office - Trailer	1735	1110	3,329	$190	$840	4.4
5976	80.0%	HP	BARD	WH151A04	19,000	Office - Trailer	1735	735	1,164	$66	$840	12.7
5976	80.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	735	1,446	$82	$840	10.2
5976	80.0%	HP	MARVAIR	AVP24HPA04N-1000BI	22,600	Office - Trailer	1735	735	1,384	$79	$840	10.6
5976	80.0%	HP	MARVAIR	AVP24HPA04N-1000BI	22,600	Office - Trailer	1735	735	1,384	$79	$840	10.6
5976	80.0%	R	POMONA AIR	ACC1000220466	60,000	Office - Trailer	1735	820	4,100	$234	$840	3.6
5976	80.0%	R	POMONA AIR	ACC150022046	90,000	Office - Trailer	1735	820	6,150	$351	$840	2.4
5978	77.8%	HP	BARD	AVP36HPA10N-1000 B1	35,200	Office - Trailer	1735	751	2,204	$126	$840	6.7
5978	77.8%	HP	BARD	WH361A05	35,600	Office - Trailer	1735	751	2,229	$127	$840	6.6
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	839	2,462	$140	$840	6.0

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	839	2,462	$140	$840	6.0
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	839	2,462	$140	$840	6.0
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	839	2,462	$140	$840	6.0
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	839	2,462	$140	$840	6.0
5978	77.8%	R	INTERTHERM, INC	PWY036BAVAA1001	35,200	Office - Trailer	1735	839	2,462	$140	$840	6.0
5978	77.8%	R	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	839	2,462	$140	$840	6.0
5978	77.8%	R	POMONA AIR	ACC60C20466	36,000	Office - Trailer	1735	839	2,518	$144	$840	5.9
5979	0.0%	HP	BARD	MHD30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5979	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5980	0.0%	HP	BARD	MHP30A-A05-C	28,000	Office - Trailer	1735	1318	3,075	$175	$840	4.8
5981	0.0%	R	INTERTHERM, INC	AWY048BAVAA1001	46,500	Office - Trailer	1735	1517	5,879	$335	$840	2.5
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5981	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5982	50.0%	HP	BARD	WH301	30,000	Office - Trailer	1735	954	2,384	$136	$840	6.2
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1082	2,812	$160	$840	5.2
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1082	2,812	$160	$840	5.2
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1082	2,812	$160	$840	5.2
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1082	2,812	$160	$840	5.2
5982	50.0%	R	INTERTHERM, INC	PWY030BAVAA-05-01	31,200	Office - Trailer	1735	1082	2,812	$160	$840	5.2
5982	50.0%	R	MARVAIR	AVP36HPAO5N-1000CI	35,625	Office - Trailer	1735	1082	3,211	$183	$840	4.6
5982	50.0%	R	MARVAIR	AVP36HPAQ5N-1000BI 06906	35,636	Office - Trailer	1735	1082	3,212	$183	$840	4.6
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5983	0.0%	R	INTERTHERM, INC	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA05	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5984	0.0%	R	INTERTHERM, INC	PWY030BAVAA0501	31,200	Office - Trailer	1735	1517	3,945	$225	$840	3.7
5985	25.0%	HP	BARD	WH301A05	30,000	Office - Trailer	1735	1136	2,840	$162	$840	5.2

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
5985	25.0%	R	INTERTHERM, INC	PWY030BABAA-05-01	31,200	Office - Trailer	1735	1299	3,378	$193	$840	4.4
5985	25.0%	R	INTERTHERM, INC	PWY030BABAA-05-01	31,200	Office - Trailer	1735	1299	3,378	$193	$840	4.4
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1299	3,378	$193	$840	4.4
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1299	3,378	$193	$840	4.4
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1299	3,378	$193	$840	4.4
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05	31,200	Office - Trailer	1735	1299	3,378	$193	$840	4.4
5985	25.0%	R	INTERTHERM, INC	PWY030BAVAA-05-01	31,200	Office - Trailer	1735	1299	3,378	$193	$840	4.4
6178	100.0%	HP	BARD	WH31A050N1000CI	35,600	Locker/Exercise	2701	0	0	$0	$0	
6178	100.0%	HP	MARVAIR	AVP36HPA10N-1000 B1	35,200	Locker/Exercise	2701	0	0	$0	$0	
6178	100.0%	R	BARD	30WA	30,000	Locker/Exercise	2701	0	0	$0	$0	
6178	100.0%	R	BARD	30WA	30,000	Locker/Exercise	2701	0	0	$0	$0	
6179	0.0%	HP	PAYNE	542EP036	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
6179	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	736	2,881	$164	$840	5.1
6179	0.0%	HP	PAYNE	542EP048	47,000	Office - Modular	3725	736	2,881	$164	$840	5.1
6179	0.0%	R	PAYNE	559EP036	35,000	Office - Modular	3725	933	2,723	$155	$840	5.4
619	0.0%	HP			36,000	storage	1886	810	2,429	$138	$840	6.1
619	0.0%	HP	CARRIER	50DQ00440	35,000	storage	1886	810	2,361	$135	$840	6.2
619	0.0%	HP	TRANE	WCC024F100BD	23,800	storage	1886	810	1,606	$92	$840	9.2
619	0.0%	HP	TRANE	WCC024F100BD	23,800	storage	1886	810	1,606	$92	$840	9.2
619	0.0%	R	CARRIER	50DF024600	240,000	storage	1886	850	16,995	$969	$840	0.9
619	0.0%	R	CARRIER	50DP012600PC	120,000	storage	1886	850	8,497	$484	$840	1.7
619	0.0%	R	CARRIER	50DP016600SC	160,000	storage	1886	850	11,330	$646	$840	1.3
619	0.0%	R	LENNOX	GCS3-46380	42,000	storage	1886	850	2,974	$170	$840	5.0
619	0.0%	R	TRANE	102SCW		storage	1886	850	0	$0	$0	
619	0.0%	R	TRANE	35SC		storage	1886	850	0	$0	$0	
619	0.0%	R	TRANE	SC54EE		storage	1886	850	0	$0	$0	
6203	0.0%	HP	BARD	24WHI	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
6203	0.0%	HP	BARD	24WHI	23,000	Office - Trailer	1735	1318	2,526	$144	$840	5.8
6203	0.0%	HP	BARD	WH241A04XX4XXX	23,600	Office - Trailer	1735	1318	2,592	$148	$840	5.7
6203	0.0%	HP	BARD	WH361A05XX4XXX	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
6203	0.0%	HP	MARVAIR	AVP36HPA05N-1000 BI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
6203	0.0%	R	BARD	36WA	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
6205	0.0%	HP	MARVAIR		36,000	Office - Trailer	1735	1318	3,954	$225	$840	3.7
624	100.0%	HP	BARD	WH181A04	19,000	Office - Modular	3725	446	705	$40	$840	20.9
6325	0.0%	HP	CARRIER	50PQ016??520MA	180,000	Office - Modular	3725	736	11,035	$629	$840	1.3
6525	0.0%	R	BARD	36WA	36,000	classroom/conference	2627	1085	3,254	$185	$840	4.5
6525	0.0%	R	BARD	36WA	36,000	classroom/conference	2627	1085	3,254	$185	$840	4.5
6526	0.0%	HP	BARD	WH361A05XX4	35,600	Office - Trailer	1735	1318	3,910	$223	$840	3.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000 CI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
6526	0.0%	HP	MARVAIR	AVP36HPA05N-1000CI	35,200	Office - Trailer	1735	1318	3,866	$220	$840	3.8
6526	0.0%	R	BARD	18WA	16,500	Office - Trailer	1735	1517	2,086	$119	$840	7.1
6526	0.0%	R	BARD	18WA	17,500	Office - Trailer	1735	1517	2,213	$126	$840	6.7
6526	0.0%	R	BARD	WA181A05XX4XXX	18,300	Office - Trailer	1735	1517	2,314	$132	$840	6.4
6527	100.0%	HP	MARVAIR	NN	36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
6527	100.0%	HP	MARVAIR	NN	36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
6527	100.0%	HP	MARVAIR	NN	36,000	Office - Trailer	1735	589	1,768	$101	$840	8.3
6575	50.0%	HP	BARD	36WH1	36,000	classroom/conference	2627	661	1,983	$113	$840	7.4
6575	50.0%	HP	MARVAIR	AVP36HPA05N1000 BI	35,200	classroom/conference	2627	661	1,939	$111	$840	7.6
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
671	100.0%	HP	B-D-P	542EE048	47,000	Office - Modular	3725	446	1,745	$99	$840	8.4
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	542EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	559EE060	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	B-D-P	559EMO36	57,500	Office - Modular	3725	446	2,135	$122	$840	6.9
671	100.0%	HP	CARRIER	50TJQ004-M-601ZC	36,000	Office - Modular	3725	446	1,337	$76	$840	11.0
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ005-M-601ZC	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	446	2,673	$152	$840	5.5
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	446	2,673	$152	$840	5.5
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	446	2,673	$152	$840	5.5
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	446	2,673	$152	$840	5.5
671	100.0%	HP	CARRIER	50TJQ007-M-611ZC	72,000	Office - Modular	3725	446	2,673	$152	$840	5.5
671	100.0%	HP	CARRIER	TJQ007-M-611ZC	72,000	Office - Modular	3725	446	2,673	$152	$840	5.5
671	100.0%	HP	LENNOX	CHP15-413-IG	35,200	Office - Modular	3725	446	1,307	$74	$840	11.3
671	100.0%	HP	TRANE	WCC024F100BE	23,800	Office - Modular	3725	446	884	$50	$840	16.7
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40ABD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3
671	100.0%	HP	TRANE	WCD048C40CBD	48,000	Office - Modular	3725	446	1,782	$102	$840	8.3

Building ID	Prog thermost at %	Heat Type	Manufacturer	Model#	Cooling capacity	Study classification	Model building	Savings (kWh/ton)	Annual kWh	$ savings	Cost	SBP
671	100.0%	HP	TRANE	WCD060C40CBD	62,000	Office - Modular	3725	446	2,302	$131	$840	6.4
671	100.0%	HP	TRANE	WCH024B100AA	23,600	Office - Modular	3725	446	876	$50	$840	16.8
671	100.0%	R	CARRIER	50TJ-004-M-611ZC	35,000	Office - Modular	3725	538	1,570	$90	$840	9.4
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	678	1,400	$80	$840	10.5
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	678	1,400	$80	$840	10.5
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	678	1,400	$80	$840	10.5
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	678	1,400	$80	$840	10.5
6925	20.0%	HP	CARRIER	50YQ024310	24,800	Office - Modular	3725	678	1,400	$80	$840	10.5
6925	20.0%	HP	CARRIER	50YQ030310	26,800	Office - Modular	3725	678	1,513	$86	$840	9.7
6925	20.0%	HP	CARRIER	50YQ030310	26,800	Office - Modular	3725	678	1,513	$86	$840	9.7
6925	20.0%	HP	CARRIER	50YQ030310	26,800	Office - Modular	3725	678	1,513	$86	$840	9.7
6925	20.0%	HP	TRANE	WCH036A300AB	35,600	Office - Modular	3725	678	2,010	$115	$840	7.3
6925	20.0%	HP	TRANE	WCH036A300AC	35,600	Office - Modular	3725	678	2,010	$115	$840	7.3
6925	20.0%	HP	TRANE	WCH036A300AC	35,600	Office - Modular	3725	678	2,010	$115	$840	7.3
6926	0.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
6926	0.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
6926	0.0%	HP	BARD	36WH2	35,400	Office - Modular	3725	736	2,170	$124	$840	6.8
6928	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
6928	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
6928	0.0%	R	BARD	36WAI	36,000	Office - Trailer	1735	1517	4,552	$259	$840	3.2
6951	0.0%	HP	BARD	48WH1	47,000	classroom/conference	2627	879	3,441	$196	$840	4.3
6951	0.0%	HP	BARD	48WH1	47,000	classroom/conference	2627	879	3,441	$196	$840	4.3
									3,060,105	$174,426	$987,000	5.7

Appendix G: Facility Wide Savings for Cool Roof Measure

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
1401	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	5200	SQFT	1735	90.6%	9.4%	0.4	0.35	2,055	$117	$520	4.4
1402	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	5200	SQFT	1735	40.3%	59.7%	0.4	0.35	1,925	$110	$520	4.7
1403	AVG ALL TYP;SINGLE-PLY MEMB	5200	SQFT	1735	100.0%	0.0%	0.4	0.35	2,080	$119	$520	4.4
1405	AVG ALL TYP;SINGLE-PLY MEMB	5200	SQFT	1735	76.1%	23.9%	0.4	0.35	2,018	$115	$520	4.5
1406	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	5200	SQFT	1735	95.4%	4.6%	0.4	0.35	2,068	$118	$520	4.4
1407	AVG ALL TYP;MTL;RF;STL	520	SQFT	2701	0.0%	100.0%	0.5	0.47	244	$14	$52	3.7
1408	AVG ALL TYP;MTL;RF;STL	184	SQFT	4128	45.5%	54.5%	0.31	0.25	51	$3	$18	6.3
1526	AVG ALL TYP;MTL;RF;STL	1440	SQFT	1735	0.0%	100.0%	0.4	0.35	504	$29	$144	5.0
1527	AVG ALL TYP;MTL;RF;STL	3000	SQFT	1735	0.0%	100.0%	0.4	0.35	1,050	$60	$300	5.0
1541	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2100	SQFT	1735	100.0%	0.0%	0.4	0.35	840	$48	$210	4.4
1601	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1832	SQFT	3725	0.0%	100.0%	0.25	0.17	311	$18	$183	10.3

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
1602	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2160	SQFT	1886	0.0%	100.0%	0.27	0.2	432	$25	$216	8.8
1602	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	30	SQFT	1886	0.0%	100.0%	0.27	0.2	6	$0	$3	8.8
1677	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	18725	SQFT	3725	6.6%	93.4%	0.25	0.17	3,282	$187	$1,873	10.0
1677	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	559	SQFT	3725	6.6%	93.4%	0.25	0.17	98	$6	$56	10.0
1726	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2100	SQFT	3725	49.8%	50.2%	0.25	0.17	441	$25	$210	8.4
1727	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2460	SQFT	1735	61.6%	38.4%	0.4	0.35	937	$53	$246	4.6
1730	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2016	SQFT	1735	0.0%	100.0%	0.4	0.35	706	$40	$202	5.0
1735	AVG ALL TYP;SINGLE-PLY MEMB	1680	SQFT	1735	100.0%	0.0%	0.4	0.35	672	$38	$168	4.4
1735	AVG ALL TYP;SINGLE-PLY MEMB	1735	SQFT	1735	100.0%	0.0%	0.4	0.35	694	$40	$174	4.4
1736	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3180	SQFT	3725	0.0%	100.0%	0.25	0.17	541	$31	$318	10.3

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
1736	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	150	SQFT	3725	0.0%	100.0%	0.25	0.17	26	$1	$15	10.3
1878	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	6572	SQFT	3725	0.0%	100.0%	0.25	0.17	1,117	$64	$657	10.3
1887	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1275	SQFT	1735	13.2%	86.8%	0.4	0.35	455	$26	$128	4.9
1887	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	325	SQFT	1735	13.2%	86.8%	0.4	0.35	116	$7	$33	4.9
1888	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	325	SQFT	1735	100.0%	0.0%	0.4	0.35	130	$7	$33	4.4
1888	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	5640	SQFT	1735	100.0%	0.0%	0.4	0.35	2,256	$129	$564	4.4
194A	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	300	SQFT	1602	100.0%	0.0%	0.6	0.6	180	$10	$30	2.9
2177	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	1800	SQFT	1735	83.1%	16.9%	0.4	0.35	705	$40	$180	4.5
2525	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2145	SQFT	1735	0.0%	100.0%	0.4	0.35	751	$43	$215	5.0
2554	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	600	SQFT	3725	100.0%	0.0%	0.25	0.17	150	$9	$60	7.0
2580	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2130	SQFT	5976	0.0%	100.0%	0.43	0.41	873	$50	$213	4.3

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
2684	AVG ALL TYP;MTL;RF;STL	1800	SQFT	1735	33.3%	66.7%	0.4	0.35	660	$38	$180	4.8
2684	AVG ALL TYP;MTL;RF;STL	3600	SQFT	1735	33.3%	66.7%	0.4	0.35	1,320	$75	$360	4.8
2726	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1800	SQFT	3725	83.2%	16.8%	0.25	0.17	426	$24	$180	7.4
2727	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	4620	SQFT	1735	49.8%	50.2%	0.4	0.35	1,732	$99	$462	4.7
2728	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2304	SQFT	1602	100.0%	0.0%	0.6	0.6	1,382	$79	$230	2.9
2801	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2808	SQFT	1735	0.0%	100.0%	0.4	0.35	983	$56	$281	5.0
2802	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1500	SQFT	1735	0.0%	100.0%	0.4	0.35	525	$30	$150	5.0
2808	AVG ALL TYP;MTL;RF;STL	300	SQFT	2701	0.0%	100.0%	0.5	0.47	141	$8	$30	3.7
2925	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	100	SQFT	3725	93.5%	6.5%	0.25	0.17	24	$1	$10	7.2
2925	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2100	SQFT	3725	93.5%	6.5%	0.25	0.17	514	$29	$210	7.2
2925	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	100	SQFT	3725	93.5%	6.5%	0.25	0.17	24	$1	$10	7.2

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
3180	AVG ALL TYP;MTL;RF;STL	4464	SQFT	1735	78.1%	21.9%	0.4	0.35	1,737	$99	$446	4.5
3203	BUILT-UP MEMB;ASPHALT;4PLY,GRAVEL	790	SQFT	1602	80.0%	20.0%	0.6	0.6	474	$27	$79	2.9
3204	BUILT-UP MEMB;ASPHALT;4PLY,GRAVEL	640	SQFT	1602	0.0%	100.0%	0.6	0.6	384	$22	$64	2.9
3226	AVG ALL TYP;MTL;RF;STL	340	SQFT	3725	39.7%	60.3%	0.25	0.17	69	$4	$34	8.7
328	AVG ALL TYP;MTL;RF;STL	744	SQFT	1602	100.0%	0.0%	0.6	0.6	446	$25	$74	2.9
328B	AVG ALL TYP;MTL;RF;STL	400	SQFT	1602	100.0%	0.0%	0.6	0.6	240	$14	$40	2.9
3520	AVG ALL TYP;MTL;RF;STL	9900	SQFT	1735	12.7%	87.3%	0.4	0.35	3,528	$201	$990	4.9
3526	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	2160	SQFT	1735	100.0%	0.0%	0.4	0.35	864	$49	$216	4.4
3703	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	13500	SQFT	1735	18.6%	81.4%	0.4	0.35	4,850	$276	$1,350	4.9
3777	AVG ALL TYP;MTL;RF;STL	4800	SQFT	1735	0.0%	100.0%	0.4	0.35	1,680	$96	$480	5.0
382	AVG ALL TYP;MTL;RF;STL	289	SQFT	1602	100.0%	0.0%	0.6	0.6	173	$10	$29	2.9
406	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	130	SQFT	1602	0.0%	100.0%	0.6	0.6	78	$4	$13	2.9

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
406	AVG ALL TYP;MTL;RF;STL	260	SQFT	1602	0.0%	100.0%	0.6	0.6	156	$9	$26	2.9
406	AVG ALL TYP;MTL;RF;STL	130	SQFT	1602	0.0%	100.0%	0.6	0.6	78	$4	$13	2.9
4107	AVG ALL TYP;MTL;RF;STL	510	SQFT	1886	0.0%	100.0%	0.27	0.2	102	$6	$51	8.8
4180	AVG ALL TYP;MTL;RF;STL	3000	SQFT	1735	80.6%	19.4%	0.4	0.35	1,171	$67	$300	4.5
4302	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1080	SQFT	1735	39.7%	60.3%	0.4	0.35	399	$23	$108	4.7
4302	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3600	SQFT	1735	39.7%	60.3%	0.4	0.35	1,331	$76	$360	4.7
4302	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1080	SQFT	1735	39.7%	60.3%	0.4	0.35	399	$23	$108	4.7
4316	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	300	SQFT	1886	0.0%	100.0%	0.27	0.2	60	$3	$30	8.8
4377	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	5040	SQFT	1735	36.1%	63.9%	0.4	0.35	1,855	$106	$504	4.8
4378	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	4180	SQFT	1735	56.9%	43.1%	0.4	0.35	1,582	$90	$418	4.6
4384	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	1560	SQFT	1735	49.4%	50.6%	0.4	0.35	585	$33	$156	4.7

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
4385	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	32	SQFT	1735	100.0%	0.0%	0.4	0.35	13	$1	$3	4.4
4385	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3959	SQFT	1735	100.0%	0.0%	0.4	0.35	1,584	$90	$396	4.4
4385	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	20	SQFT	1735	100.0%	0.0%	0.4	0.35	8	$0	$2	4.4
4387	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	3640	SQFT	1735	61.0%	39.0%	0.4	0.35	1,385	$79	$364	4.6
4387	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	792	SQFT	1735	61.0%	39.0%	0.4	0.35	301	$17	$79	4.6
4406	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1650	SQFT	1735	0.0%	100.0%	0.4	0.35	578	$33	$165	5.0
4407	AVG ALL TYP;MTL;RF;STL	300	SQFT	1886	0.0%	100.0%	0.27	0.2	60	$3	$30	8.8
4475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2088	SQFT	1602	100.0%	0.0%	0.6	0.6	1,253	$71	$209	2.9
4525	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1260	SQFT	3725	100.0%	0.0%	0.25	0.17	315	$18	$126	7.0
4675	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3024	SQFT	4128	92.8%	7.2%	0.31	0.25	924	$53	$302	5.7

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
5104	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	648	SQFT	1735	0.0%	100.0%	0.4	0.35	227	$13	$65	5.0
5105	AVG ALL TYP;MTL;RF;STL	300	SQFT	1735	17.3%	82.7%	0.4	0.35	108	$6	$30	4.9
5125	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	3000	SQFT	1735	87.9%	12.1%	0.4	0.35	1,182	$67	$300	4.5
517A	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	540	SQFT	1602	0.0%	100.0%	0.6	0.6	324	$18	$54	2.9
520	AVG ALL TYP;MTL;RF;STL	50	SQFT	1886	100.0%	0.0%	0.27	0.2	14	$1	$5	6.5
520	AVG ALL TYP;MTL;RF;STL	460	SQFT	1886	100.0%	0.0%	0.27	0.2	124	$7	$46	6.5
5207	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	300	SQFT	1886	0.0%	100.0%	0.27	0.2	60	$3	$30	8.8
5225	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	1488	SQFT	1735	100.0%	0.0%	0.4	0.35	595	$34	$149	4.4
5225	AVG ALL TYP;MTL;RF;STL	624	SQFT	1735	100.0%	0.0%	0.4	0.35	250	$14	$62	4.4
5226	AVG ALL TYP;MTL;RF;STL	2880	SQFT	1735	47.0%	53.0%	0.4	0.35	1,076	$61	$288	4.7
523	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	4000	SQFT	1602	100.0%	0.0%	0.6	0.6	2,400	$137	$400	2.9

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
523	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	36	SQFT	1602	100.0%	0.0%	0.6	0.6	22	$1	$4	2.9
533	AVG ALL TYP;MTL;RF;STL	396	SQFT	1886	100.0%	0.0%	0.27	0.2	107	$6	$40	6.5
5425	AVG ALL TYP;MTL;RF;STL	5760	SQFT	1735	63.9%	36.1%	0.4	0.35	2,200	$125	$576	4.6
5426	AVG ALL TYP;MTL;RF;STL	4900	SQFT	1735	55.0%	45.0%	0.4	0.35	1,850	$105	$490	4.6
5475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3000	SQFT	3725	86.0%	14.0%	0.25	0.17	716	$41	$300	7.3
5475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2250	SQFT	3725	86.0%	14.0%	0.25	0.17	537	$31	$225	7.3
5475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3000	SQFT	3725	86.0%	14.0%	0.25	0.17	716	$41	$300	7.3
5475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2250	SQFT	3725	86.0%	14.0%	0.25	0.17	537	$31	$225	7.3
5475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3000	SQFT	3725	86.0%	14.0%	0.25	0.17	716	$41	$300	7.3
5475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	4375	SQFT	3725	86.0%	14.0%	0.25	0.17	1,045	$60	$438	7.3
5475	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3000	SQFT	3725	86.0%	14.0%	0.25	0.17	716	$41	$300	7.3

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
5626	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1080	SQFT	3725	30.7%	69.3%	0.25	0.17	210	$12	$108	9.0
5626	ASSEMBLY BU GLASS FIBER W/INSUL,FLASH	72	SQFT	3725	30.7%	69.3%	0.25	0.17	14	$1	$7	9.0
5626	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	2160	SQFT	3725	30.7%	69.3%	0.25	0.17	420	$24	$216	9.0
5627	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	7200	SQFT	3725	3.2%	96.8%	0.25	0.17	1,242	$71	$720	10.2
571	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	900	SQFT	3725	3.1%	96.9%	0.25	0.17	155	$9	$90	10.2
571	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	4680	SQFT	3725	3.1%	96.9%	0.25	0.17	807	$46	$468	10.2
597	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	320	SQFT	3725	0.0%	100.0%	0.25	0.17	54	$3	$32	10.3
597	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	312	SQFT	3725	0.0%	100.0%	0.25	0.17	53	$3	$31	10.3
597	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	288	SQFT	3725	0.0%	100.0%	0.25	0.17	49	$3	$29	10.3
5975	AVG ALL TYP;MTL;RF;STL	6955	SQFT	1735	88.7%	11.3%	0.4	0.35	2,743	$156	$696	4.4
5980	AVG ALL TYP;MTL;RF;STL	5640	SQFT	1735	100.0%	0.0%	0.4	0.35	2,256	$129	$564	4.4

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
614	BUILT-UP,BASE&4P,GLSS FELT,FLASH,INSUL	1080	SQFT	1886	100.0%	0.0%	0.27	0.2	292	$17	$108	6.5
614	BUILT-UP,BASE&4P,GLSS FELT,FLASH,INSUL	3240	SQFT	1886	100.0%	0.0%	0.27	0.2	875	$50	$324	6.5
6178	AVG ALL TYP;MTL;RF;STL	1080	SQFT	2701	54.1%	45.9%	0.5	0.47	525	$30	$108	3.6
6178	AVG ALL TYP;MTL;RF;STL	350	SQFT	2701	54.1%	45.9%	0.5	0.47	170	$10	$35	3.6
6179	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	3722	SQFT	3725	73.4%	26.6%	0.25	0.17	851	$49	$372	7.7
619	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	280	SQFT	1886	66.3%	33.7%	0.27	0.2	69	$4	$28	7.1
622	AVG ALL TYP;MTL;RF;STL	2400	SQFT	1886	100.0%	0.0%	0.27	0.2	648	$37	$240	6.5
624	AVG ALL TYP;MTL;RF;STL	352	SQFT	3725	76.0%	24.0%	0.25	0.17	81	$5	$35	7.6
625	AVG ALL TYP;MTL;RF;STL	7398	SQFT	1886	0.0%	100.0%	0.27	0.2	1,480	$84	$740	8.8
639	AVG ALL TYP;MTL;RF;STL	448	SQFT	1886	100.0%	0.0%	0.27	0.2	121	$7	$45	6.5
6501	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1008	SQFT	1735	100.0%	0.0%	0.4	0.35	403	$23	$101	4.4
6525	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	1000	SQFT	2627	0.0%	100.0%	0.6	0.55	550	$31	$100	3.2

SiteID	TYPE-DESCRIPTION	REP-QTY	UNIT	Model building	Heat pump %	Electric Resistance %	Savings (kWh/SF) with heat pump	Savings (kWh/SF) with Electric Heat	kWh savings	Energy cost savings	incremental cost	SPB
6526	AVG ALL TYP;MTL;RF;STL	300	SQFT	1735	77.1%	22.9%	0.4	0.35	117	$7	$30	4.5
6526	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	2703	SQFT	1735	77.1%	22.9%	0.4	0.35	1,050	$60	$270	4.5
6526	BUILT-UP MEMB,GLSS FBR,4PLY,(TYPE IV)	110	SQFT	1735	77.1%	22.9%	0.4	0.35	43	$2	$11	4.5
6526	AVG ALL TYP;MTL;RF;STL	300	SQFT	1735	77.1%	22.9%	0.4	0.35	117	$7	$30	4.5
6575	ALUM RFG;CORRUGATED;.024"T;STEEL FRAME	1440	SQFT	2627	100.0%	0.0%	0.6	0.55	864	$49	$144	2.9
6925	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	4200	SQFT	3725	100.0%	0.0%	0.25	0.17	1,050	$60	$420	7.0
6928	BUILT-UP MEMB;COLD APPLIED RF;3 PLY SYS	1350	SQFT	1735	0.0%	100.0%	0.4	0.35	473	$27	$135	5.0
6951	BUILT-UP MEMB;ROLL;4PLS,MIN SURF SELVAG	1952	SQFT	2627	94.0%	6.0%	0.6	0.55	1,165	$66	$195	2.9
TOTAL		298,254							98,576	$5,619	$29,825	5.3

Appendix H: Facility Wide Savings for Window Shading Measure

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
110	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00
1277	1602	0	0	42	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.64	0.13
1280	1735	96	60	96	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
134	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00
135	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00
1401	1735	140	56	160	21.5	26.3	20	19.3	25.7	17.7	91%	9%	0.71	0.14
1402	1735	48	48	160	21.5	26.3	20	19.3	25.7	17.7	40%	60%	0.65	0.13
1403	1735	0	192	0	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.64	0.13
1404	1735	68	120	68	21.5	26.3	20	19.3	25.7	17.7	71%	29%	0.42	0.08
1405	1735	120	48	160	21.5	26.3	20	19.3	25.7	17.7	76%	24%	0.42	0.08
1406	1735	120	60	160	21.5	26.3	20	19.3	25.7	17.7	95%	5%	0.42	0.08
1407	2701	20	0	13	19	12.5	14.3	16.9	0.7	12.2	0%	100%	0.71	0.14
1408	4128	12	0	0	12.9	7.8	14.3	9.2	3.9	12.5	45%	55%	0.64	0.13
1413	5976	36	0	0	23.3	20.4	12.3	22.1	18.7	11.7	100%	0%	0.71	0.14
1456	1735	102	36	96	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.42	0.08
1481	1735	108	48	48	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
1492	1735	24	48	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
1526	1735	36	0	36	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13
1527	1735	72	48	60	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
1541	1735	0	93.8	18.75	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.64	0.13
1578	1735	27	18	81	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.71	0.14
1579	1735	0	72	24	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.42	0.08
1601	3725	36	48	0	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.71	0.14
1602	1886	48	36	60	16.7	7	16.6	13	0	12.5	0%	100%	0.71	0.14
1632	1735	90	36	72	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.65	0.13
164	1602	12	15	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
1677	3725	1345	1205	1334	13.9	14.5	9.9	4.3	5.2	6.9	7%	93%	0.13	0.03
1678	1735	70	42	70	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13
1680	3725	154	56	168	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.42	0.08
1713	2701	0	0	0	19	12.5	14.3	16.9	0.7	12.2	0%	100%	0.00	0.00
1714	2701	0	0	0	19	12.5	14.3	16.9	0.7	12.2	100%	0%	0.00	0.00

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
1715	1602	0	2	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
1726	3725	60	36	36	13.9	14.5	9.9	4.3	5.2	6.9	50%	50%	0.71	0.14
1727	1735	9	140	18	21.5	26.3	20	19.3	25.7	17.7	62%	38%	0.71	0.14
1730	1735	12	84	36	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
1735	1735	248	284	50	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.35	0.07
1736	3725	12	109	39	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.13	0.03
1739	3725	42	154	84	13.9	14.5	9.9	4.3	5.2	6.9	94%	6%	0.42	0.08
1802	2701	0	0	0	19	12.5	14.3	16.9	0.7	12.2	0%	100%	0.00	0.00
1830	1735	52	126	70	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
1879	2627	744	57.5	0	20.7	15.3	13.6	18.4	11.5	12.3	87%	13%	0.42	0.08
1884	1735	30	28	52	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.65	0.13
1885	1735	52	84	0	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.65	0.13
1886	1602	102	150	64	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
1887	1735	96	72	144	21.5	26.3	20	19.3	25.7	17.7	13%	87%	0.64	0.13
1888	1735	240	192	88	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.42	0.08
1889	1735	336	284	336	21.5	26.3	20	19.3	25.7	17.7	92%	8%	0.42	0.08

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
1925	1735	48	12	36	21.5	26.3	20	19.3	25.7	17.7	35%	65%	0.71	0.14
1927	1735	36	36	36	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.71	0.14
193A	5976	0	0	0	23.3	20.4	12.3	22.1	18.7	11.7	0%	100%	0.00	0.00
194A	1602	0	24	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
195	1602	0	0	0	32.2	29.1	14.3	32.2	29.6	12.2	0%	100%	0.71	0.14
196A	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.71	0.14
198	1602	0	72	0	32.2	29.1	14.3	32.2	29.6	12.2	0%	100%	0.64	0.13
211	3725	240	440	216	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.42	0.08
2127	3725	42	14	28	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.65	0.13
2128	3725	40	40	0	13.9	14.5	9.9	4.3	5.2	6.9	27%	73%	0.64	0.13
2177	1735	60	24	36	21.5	26.3	20	19.3	25.7	17.7	83%	17%	0.71	0.14
2180	1735	8	48	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13
2475	3725	108	48	40	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.64	0.13
252	1886	0	0	12	16.7	7	16.6	13	0	12.5	100%	0%	0.71	0.14
2525	1735	24	60	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
2552	1735	60	0	60	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.64	0.13
2554	3725	40	0	48	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.64	0.13
2580	5976	0	0	0	23.3	20.4	12.3	22.1	18.7	11.7	0%	100%	0.00	0.00
2625	2701	8	0	0	19	12.5	14.3	16.9	0.7	12.2	100%	0%	0.65	0.13
2627	2627	42	0	42	20.7	15.3	13.6	18.4	11.5	12.3	0%	100%	0.64	0.13
2679	1735	77	117	64	21.5	26.3	20	19.3	25.7	17.7	41%	59%	0.65	0.13
2684	1735	72	63	60	21.5	26.3	20	19.3	25.7	17.7	33%	67%	0.35	0.07
2685	1735	108	81	54	21.5	26.3	20	19.3	25.7	17.7	23%	77%	0.64	0.13
2687	1735	48	8	48	21.5	26.3	20	19.3	25.7	17.7	33%	67%	0.64	0.13
2701	2701	0	0	0	19	12.5	14.3	16.9	0.7	12.2	0%	100%	0.00	0.00
2726	3725	44	137	22	13.9	14.5	9.9	4.3	5.2	6.9	83%	17%	0.35	0.07
2727	1735	78	48	84	21.5	26.3	20	19.3	25.7	17.7	50%	50%	0.71	0.14
2728	1602	24	60	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
2775	1735	196	48	108	21.5	26.3	20	19.3	25.7	17.7	37%	63%	0.71	0.14
2777	2627	32	0	32	20.7	15.3	13.6	18.4	11.5	12.3	100%	0%	0.64	0.13
2787	2701	0	56	0	19	12.5	14.3	16.9	0.7	12.2	33%	67%	0.64	0.13

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
2801	1735	24	0	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
2802	1735	24	80	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
2804	1735	20	0	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13
2808	2701	4	0	0	19	12.5	14.3	16.9	0.7	12.2	0%	100%	0.71	0.14
2825	3725	264	264	264	13.9	14.5	9.9	4.3	5.2	6.9	87%	13%	0.64	0.13
2925	3725	138	193	130	13.9	14.5	9.9	4.3	5.2	6.9	94%	6%	0.65	0.13
3180	1735	54	60	72	21.5	26.3	20	19.3	25.7	17.7	78%	22%	0.71	0.14
3203	1602	0	0	0	32.2	29.1	14.3	32.2	29.6	12.2	80%	20%	0.00	0.00
3204	1602	0	48	0	32.2	29.1	14.3	32.2	29.6	12.2	0%	100%	0.71	0.14
3226	3725	81	81	162	13.9	14.5	9.9	4.3	5.2	6.9	40%	60%	0.71	0.14
328	1602	0	0	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.00	0.00
328B	1602	0	0	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.00	0.00
3427	3725	160	120	144	13.9	14.5	9.9	4.3	5.2	6.9	95%	5%	0.13	0.03
3520	1735	96	240	96	21.5	26.3	20	19.3	25.7	17.7	13%	87%	0.71	0.14
3526	1735	0	45	72	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.42	0.08

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
3527	3725	400	56	154	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.64	0.13
3555	1735	0	12	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
3577	1735	54	144	162	21.5	26.3	20	19.3	25.7	17.7	39%	61%	0.64	0.13
3649	4727	0	24	0	10.8	5.2	13.4	10.8	5.2	13.4	100%	0%	0.65	0.13
367	3725	28	28	0	13.9	14.5	9.9	4.3	5.2	6.9	33%	67%	0.42	0.08
3703	1735	96	180	120	21.5	26.3	20	19.3	25.7	17.7	19%	81%	0.71	0.14
3724	3725	624	552	648	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.35	0.07
3725	3725	600	552	642	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.64	0.13
3726	3725	504	649	576	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.35	0.07
3751	1735	24	54	10	21.5	26.3	20	19.3	25.7	17.7	67%	33%	0.71	0.14
376	1602	66	18	66	32.2	29.1	14.3	32.2	29.6	12.2	0%	100%	0.71	0.14
3775	1735	0	70	0	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.35	0.07
3777	1735	216	72	216	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13
379	1602	0	0	0	32.2	29.1	14.3	32.2	29.6	12.2	93%	7%	0.00	0.00

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
382	1602	0	0	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
3925	2627	0	42	0	20.7	15.3	13.6	18.4	11.5	12.3	0%	100%	0.64	0.13
406	1602	12	0	12	32.2	29.1	14.3	32.2	29.6	12.2	0%	100%	0.71	0.14
4107	1886	42	12	42	16.7	7	16.6	13	0	12.5	0%	100%	0.71	0.14
4128	4128	0	0	0	12.9	7.8	14.3	9.2	3.9	12.5	100%	0%	0.00	0.00
4161	1735	0	54	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
4180	1735	60	36	32	21.5	26.3	20	19.3	25.7	17.7	81%	19%	0.71	0.14
4182	1735	96	48	96	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.65	0.13
4184	1735	48	33	25	21.5	26.3	20	19.3	25.7	17.7	63%	37%	0.64	0.13
4302	1735	94	66	54	21.5	26.3	20	19.3	25.7	17.7	40%	60%	0.64	0.13
4316	1886	8	3	12	16.7	7	16.6	13	0	12.5	0%	100%	0.71	0.14
4325	1735	60	36	48	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
4352	1602	12	0	24	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
4377	1735	78	60	84	21.5	26.3	20	19.3	25.7	17.7	36%	64%	0.71	0.14
4378	1735	48	54	48	21.5	26.3	20	19.3	25.7	17.7	57%	43%	0.71	0.14
4382	1735	26	56	54	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.35	0.07

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
4383	1735	48	48	96	21.5	26.3	20	19.3	25.7	17.7	49%	51%	0.71	0.14
4385	1735	18	64	18	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.71	0.14
4387	1735	48	78	48	21.5	26.3	20	19.3	25.7	17.7	61%	39%	0.71	0.14
4388	2701	25	6	12	19	12.5	14.3	16.9	0.7	12.2	100%	0%	0.71	0.14
4406	1735	0	0	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.00	0.00
4407	1886	6	2.25	6	16.7	7	16.6	13	0	12.5	0%	100%	0.71	0.14
4442	1735	40	64	40	21.5	26.3	20	19.3	25.7	17.7	13%	87%	0.42	0.08
4475	1602	72	0	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.71	0.14
4509	1886	0	0	0	16.7	7	16.6	13	0	12.5	0%	100%	0.00	0.00
4525	3725	300	419	178.5	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.35	0.07
4576	5976	0	80	100	23.3	20.4	12.3	22.1	18.7	11.7	100%	0%	0.42	0.08
4725	5976	464	0	84	23.3	20.4	12.3	22.1	18.7	11.7	0%	100%	0.35	0.07
4726	3725	520	172	468	13.9	14.5	9.9	4.3	5.2	6.9	0%	100%	0.35	0.07
4727	4727	277	312	221	10.8	5.2	13.4	10.8	5.2	13.4	0%	100%	0.35	0.07
4728	4727	200	320	160	10.8	5.2	13.4	10.8	5.2	13.4	0%	100%	0.35	0.07
4729	4727	228	344	260	10.8	5.2	13.4	10.8	5.2	13.4	0%	100%	0.35	0.07
473	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
4924	1735	0	32	0	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.71	0.14
501	3725	4	0	4	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.65	0.13
5104	1735	0	0	48	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.35	0.07
5105	1735	0	0	6	21.5	26.3	20	19.3	25.7	17.7	17%	83%	0.71	0.14
5125	1735	68	60	60	21.5	26.3	20	19.3	25.7	17.7	88%	12%	0.71	0.14
519A	1886	12.5	0	12.5	16.7	7	16.6	13	0	12.5	100%	0%	0.71	0.14
520	1886	0	16	16	16.7	7	16.6	13	0	12.5	100%	0%	0.71	0.14
5207	1886	0	0	0	16.7	7	16.6	13	0	12.5	0%	100%	0.71	0.14
5225	1735	48	24	60	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.71	0.14
5226	1735	52	36	36	21.5	26.3	20	19.3	25.7	17.7	47%	53%	0.71	0.14
523	1602	0	0	0	32.2	29.1	14.3	32.2	29.6	12.2	100%	0%	0.00	0.00
531	1602	0	150	0	32.2	29.1	14.3	32.2	29.6	12.2	0%	100%	0.42	0.08
532	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
533	1886	0	0	12	16.7	7	16.6	13	0	12.5	100%	0%	0.71	0.14
5425	1735	84	48	96	21.5	26.3	20	19.3	25.7	17.7	64%	36%	0.71	0.14
5426	1735	48	96	48	21.5	26.3	20	19.3	25.7	17.7	55%	45%	0.71	0.14
5475	3725	1848	1474	1680	13.9	14.5	9.9	4.3	5.2	6.9	86%	14%	0.13	0.03
5626	3725	134	108	100	13.9	14.5	9.9	4.3	5.2	6.9	31%	69%	0.65	0.13
5627	3725	180	108	207	13.9	14.5	9.9	4.3	5.2	6.9	3%	97%	0.35	0.07
5675	3725	108	0	96	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.42	0.08
571	3725	1267	2410	1685	13.9	14.5	9.9	4.3	5.2	6.9	3%	97%	0.35	0.07
5974	1735	48	48	24	21.5	26.3	20	19.3	25.7	17.7	91%	9%	0.64	0.13
5975	1735	70	36	84	21.5	26.3	20	19.3	25.7	17.7	89%	11%	0.64	0.13
5976	1735	0	50	80	21.5	26.3	20	19.3	25.7	17.7	25%	75%	0.71	0.14
5978	1735	43	108	36	21.5	26.3	20	19.3	25.7	17.7	30%	70%	0.64	0.13
5979	1735	192	24	192	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.64	0.13
5980	1735	192	96	192	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.64	0.13
5981	1735	0	216	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13
5982	1735	24	192	48	21.5	26.3	20	19.3	25.7	17.7	12%	88%	0.64	0.13
5983	1735	24	168	72	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
5984	1735	24	216	72	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.64	0.13
5985	1735	208	0	240	21.5	26.3	20	19.3	25.7	17.7	12%	88%	0.64	0.13
612A	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00
614	1886	24	0	48	16.7	7	16.6	13	0	12.5	100%	0%	0.42	0.08
614	1886	24	0	48	16.7	7	16.6	13	0	12.5	100%	0%	0.42	0.08
6178	2701	24	0	45	19	12.5	14.3	16.9	0.7	12.2	54%	46%	0.71	0.14
6179	3725	28	140	112	13.9	14.5	9.9	4.3	5.2	6.9	73%	27%	0.42	0.08
619	1886	0	0	48	16.7	7	16.6	13	0	12.5	66%	34%	0.71	0.14
6203	1735	48	0	48	21.5	26.3	20	19.3	25.7	17.7	75%	25%	0.71	0.14
6205	1735	0	48	0	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.71	0.14
622	1886	24	0	24	16.7	7	16.6	13	0	12.5	100%	0%	0.71	0.14
623	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00
624	3725	16	0	0	13.9	14.5	9.9	4.3	5.2	6.9	76%	24%	0.71	0.14
625	1886	0	0	0	16.7	7	16.6	13	0	12.5	0%	100%	0.71	0.14

SiteID	Model building	E area	S area	W area	E window savings (kWh/SF) HP	S window savings (kWh/SF) HP	W window savings (kWh/SF) HP	E window savings (kWh/SF) ELEC	S window savings (kWh/SF) ELEC	W window savings (kWh/SF) ELEC	HP%	R%	Base SHGC	Measure SHGC
6325	3725	72	144	72	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.35	0.07
639	1886	0	12	0	16.7	7	16.6	13	0	12.5	100%	0%	0.71	0.14
6501	1735	40	0	100	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.71	0.14
6525	2627	0	0	0	20.7	15.3	13.6	18.4	11.5	12.3	0%	100%	0.71	0.14
6526	1735	0	0	0	21.5	26.3	20	19.3	25.7	17.7	77%	23%	0.71	0.14
6527	1735	14	70	0	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.71	0.14
6575	2627	242	36	6	20.7	15.3	13.6	18.4	11.5	12.3	100%	0%	0.71	0.14
671	3725	1267	2410	1685	13.9	14.5	9.9	4.3	5.2	6.9	64%	36%	0.35	0.07
684	1886	0	0	0	16.7	7	16.6	13	0	12.5	100%	0%	0.00	0.00
6870	1735	32	0	32	21.5	26.3	20	19.3	25.7	17.7	100%	0%	0.64	0.13
6925	3725	90	210	90	13.9	14.5	9.9	4.3	5.2	6.9	100%	0%	0.42	0.08
6926	3725	81	12	84	13.9	14.5	9.9	4.3	5.2	6.9	83%	17%	0.71	0.14
6928	1735	48	56	42	21.5	26.3	20	19.3	25.7	17.7	0%	100%	0.42	0.08
6951	2627	0	0	0	20.7	15.3	13.6	18.4	11.5	12.3	94%	6%	0.00	0.00
Total		19312	###	18417										

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
110	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
1277	0	$0	$0	N/A	0	$0	$0	N/A	309	$18	$149	8.5
1280	1057	$60	$341	5.7	880	$50	$213	4.2	970	$55	$341	6.2
134	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
135	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
1401	1701	$97	$497	5.1	839	$48	$199	4.2	1806	$103	$568	5.5
1402	506	$29	$170	5.9	650	$37	$170	4.6	1556	$89	$568	6.4
1403	0	$0	$0	N/A	2601	$148	$682	4.6	0	$0	$0	N/A
1404	474	$27	$241	8.9	1047	$60	$426	7.1	439	$25	$241	9.6
1405	841	$48	$426	8.9	419	$24	$170	7.1	1040	$59	$568	9.6
1406	858	$49	$426	8.7	527	$30	$213	7.1	1063	$61	$568	9.4
1407	193	$11	$71	6.5	0	$0	$0	N/A	91	$5	$46	8.9
1408	67	$4	$43	11.1	0	$0	$0	N/A	0	$0	$0	N/A
1413	479	$27	$128	4.7	0	$0	$0	N/A	0	$0	$0	N/A
1456	658	$37	$362	9.7	309	$18	$128	7.3	568	$32	$341	10.5
1481	1074	$61	$383	6.3	635	$36	$170	4.7	438	$25	$170	6.8
1492	264	$15	$85	5.7	704	$40	$170	4.2	0	$0	$0	N/A

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
1526	358	$20	$128	6.3	0	$0	$0	N/A	328	$19	$128	6.8
1527	793	$45	$256	5.7	704	$40	$170	4.2	606	$35	$213	6.2
1541	0	$0	$0	N/A	1270	$72	$333	4.6	193	$11	$67	6.0
1578	331	$19	$96	5.1	270	$15	$64	4.1	925	$53	$288	5.5
1579	0	$0	$0	N/A	618	$35	$256	7.3	142	$8	$85	10.5
1601	88	$5	$128	25.4	142	$8	$170	21.0	0	$0	$0	N/A
1602	356	$20	$170	8.4	0	$0	$0	N/A	428	$24	$213	8.7
1632	1010	$58	$320	5.5	494	$28	$128	4.5	752	$43	$256	6.0
164	221	$13	$43	3.4	249	$14	$53	3.8	0	$0	$0	N/A
1677	693	$39	$4,775	120.9	731	$42	$4,278	102.6	989	$56	$4,736	84.0
1678	696	$40	$249	6.3	556	$32	$149	4.7	638	$36	$249	6.8
1680	221	$13	$547	43.4	97	$6	$199	35.9	387	$22	$596	27.0
1713	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
1714	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
1715	0	$0	$0	N/A	33	$2	$7	3.8	0	$0	$0	N/A
1726	311	$18	$213	12.0	202	$12	$128	11.1	172	$10	$128	13.0

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
1727	106	$6	$32	5.3	2083	$119	$497	4.2	196	$11	$64	5.7
1730	132	$8	$43	5.7	1232	$70	$298	4.2	364	$21	$128	6.2
1735	1484	$85	$880	10.4	2079	$119	$1,008	8.5	278	$16	$178	11.2
1736	5	$0	$43	138.7	59	$3	$387	114.7	28	$2	$138	86.5
1739	186	$11	$149	14.0	715	$41	$547	13.4	272	$16	$298	19.2
1802	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
1830	573	$33	$185	5.7	1848	$105	$447	4.2	707	$40	$249	6.2
1879	5068	$289	$2,641	9.1	284	$16	$204	12.6	0	$0	$0	N/A
1884	337	$19	$107	5.5	384	$22	$99	4.5	543	$31	$185	6.0
1885	584	$33	$185	5.5	1153	$66	$298	4.5	0	$0	$0	N/A
1886	1874	$107	$362	3.4	2491	$142	$533	3.8	522	$30	$227	7.6
1887	969	$55	$341	6.2	956	$54	$256	4.7	1335	$76	$511	6.7
1888	1724	$98	$852	8.7	1687	$96	$682	7.1	588	$34	$312	9.3
1889	2395	$137	$1,193	8.7	2491	$142	$1,008	7.1	2226	$127	$1,193	9.4
1925	550	$31	$170	5.4	177	$10	$43	4.2	380	$22	$128	5.9
1927	442	$25	$128	5.1	540	$31	$128	4.1	411	$23	$128	5.5

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
193A	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
194A	0	$0	$0	N/A	399	$23	$85	3.8	0	$0	$0	N/A
195	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
196A	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
198	0	$0	$0	N/A	1098	$63	$256	4.1	0	$0	$0	N/A
211	345	$20	$852	43.4	764	$44	$1,562	35.9	498	$28	$767	27.0
2127	305	$17	$149	8.6	106	$6	$50	8.2	145	$8	$99	12.1
2128	143	$8	$142	17.5	160	$9	$142	15.6	0	$0	$0	N/A
2177	724	$41	$213	5.2	359	$20	$85	4.2	403	$23	$128	5.6
2180	80	$5	$28	6.3	635	$36	$170	4.7	0	$0	$0	N/A
2475	773	$44	$383	8.7	358	$20	$170	8.3	204	$12	$142	12.2
252	0	$0	$0	N/A	0	$0	$0	N/A	114	$6	$43	6.6
2525	264	$15	$85	5.7	880	$50	$213	4.2	0	$0	$0	N/A
2552	664	$38	$213	5.6	0	$0	$0	N/A	618	$35	$213	6.0
2554	286	$16	$142	8.7	0	$0	$0	N/A	245	$14	$170	12.2

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
2580	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
2625	79	$5	$28	6.3	0	$0	$0	N/A	0	$0	$0	N/A
2627	398	$23	$149	6.6	0	$0	$0	N/A	266	$15	$149	9.8
2679	812	$46	$273	5.9	1585	$90	$415	4.6	623	$36	$227	6.4
2684	402	$23	$256	11.2	454	$26	$224	8.6	308	$18	$213	12.1
2685	1102	$63	$383	6.1	1078	$61	$288	4.7	507	$29	$192	6.6
2687	495	$28	$170	6.0	107	$6	$28	4.7	456	$26	$170	6.6
2701	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
2726	151	$9	$156	18.2	492	$28	$485	17.3	58	$3	$78	23.8
2727	908	$52	$277	5.4	712	$41	$170	4.2	903	$51	$298	5.8
2728	441	$25	$85	3.4	996	$57	$213	3.8	0	$0	$0	N/A
2775	2250	$128	$696	5.4	710	$40	$170	4.2	1143	$65	$383	5.9
2777	341	$19	$114	5.8	0	$0	$0	N/A	224	$13	$114	8.9
2787	0	$0	$0	N/A	132	$8	$199	26.4	0	$0	$0	N/A
2801	264	$15	$85	5.7	0	$0	$0	N/A	0	$0	$0	N/A
2802	264	$15	$85	5.7	1173	$67	$284	4.2	0	$0	$0	N/A

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
2804	199	$11	$71	6.3	0	$0	$0	N/A	0	$0	$0	N/A
2808	39	$2	$14	6.5	0	$0	$0	N/A	0	$0	$0	N/A
2825	1724	$98	$937	9.5	1811	$103	$937	9.1	1294	$74	$937	12.7
2925	953	$54	$488	9.0	1396	$80	$683	8.6	659	$38	$462	12.3
3180	648	$37	$192	5.2	896	$51	$213	4.2	801	$46	$256	5.6
3203	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
3204	0	$0	$0	N/A	811	$46	$170	3.7	0	$0	$0	N/A
3226	375	$21	$288	13.4	411	$23	$288	12.3	748	$43	$575	13.5
328	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
328B	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
3427	224	$13	$568	44.6	175	$10	$426	42.6	146	$8	$511	61.3
3520	1073	$61	$341	5.6	3531	$201	$852	4.2	986	$56	$341	6.1
3526	0	$0	$0	N/A	395	$23	$160	7.1	481	$27	$256	9.3
3527	886	$50	$1,420	28.1	150	$9	$199	23.3	547	$31	$547	17.5
3555	0	$0	$0	N/A	176	$10	$43	4.2	0	$0	$0	N/A

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
3577	561	$32	$192	6.0	1923	$110	$511	4.7	1551	$88	$575	6.5
3649	0	$0	$0	N/A	65	$4	$85	22.9	0	$0	$0	N/A
367	70	$4	$99	25.0	77	$4	$99	22.6	0	$0	$0	N/A
3703	1080	$62	$341	5.5	2652	$151	$639	4.2	1241	$71	$426	6.0
3724	747	$43	$2,215	52.0	799	$46	$1,960	43.0	1245	$71	$2,300	32.4
3725	1329	$76	$2,130	28.1	1478	$84	$1,960	23.3	2282	$130	$2,279	17.5
3726	603	$34	$1,789	52.0	940	$54	$2,304	43.0	1106	$63	$2,045	32.4
3751	285	$16	$85	5.3	804	$46	$192	4.2	110	$6	$36	5.7
376	1213	$69	$234	3.4	304	$17	$64	3.7	460	$26	$234	8.9
3775	0	$0	$0	N/A	513	$29	$249	8.5	0	$0	$0	N/A
3777	2147	$122	$767	6.3	953	$54	$256	4.7	1969	$112	$767	6.8
379	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
382	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
3925	0	$0	$0	N/A	249	$14	$149	10.5	0	$0	$0	N/A
406	221	$13	$43	3.4	0	$0	$0	N/A	84	$5	$43	8.9

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
4107	312	$18	$149	8.4	0	$0	$0	N/A	300	$17	$149	8.7
4128	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
4161	0	$0	$0	N/A	792	$45	$192	4.2	0	$0	$0	N/A
4180	722	$41	$213	5.2	538	$31	$128	4.2	357	$20	$114	5.6
4182	1077	$61	$341	5.5	659	$38	$170	4.5	1002	$57	$341	6.0
4184	512	$29	$170	5.8	443	$25	$117	4.6	247	$14	$89	6.3
4302	977	$56	$334	6.0	882	$50	$234	4.7	518	$30	$192	6.5
4316	59	$3	$28	8.4	0	$0	$0	N/A	86	$5	$43	8.7
4325	661	$38	$213	5.7	528	$30	$128	4.2	485	$28	$170	6.2
4352	221	$13	$43	3.4	0	$0	$0	N/A	196	$11	$85	7.6
4377	895	$51	$277	5.4	887	$51	$213	4.2	888	$51	$298	5.9
4378	563	$32	$170	5.3	803	$46	$192	4.2	521	$30	$170	5.7
4382	156	$9	$92	10.4	410	$23	$199	8.5	301	$17	$192	11.2
4383	559	$32	$170	5.4	712	$41	$170	4.2	1032	$59	$341	5.8
4385	221	$13	$64	5.1	961	$55	$227	4.1	205	$12	$64	5.5
4387	565	$32	$170	5.3	1160	$66	$277	4.2	523	$30	$170	5.7

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
4388	271	$15	$89	5.7	43	$2	$21	8.7	98	$6	$43	7.6
4406	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
4407	45	$3	$21	8.4	0	$0	$0	N/A	43	$2	$21	8.7
4442	262	$15	$142	9.5	551	$31	$227	7.2	240	$14	$142	10.4
4475	1323	$75	$256	3.4	0	$0	$0	N/A	0	$0	$0	N/A
4509	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
4525	1161	$66	$1,065	16.1	1689	$96	$1,486	15.4	492	$28	$634	22.6
4576	0	$0	$0	N/A	545	$31	$284	9.1	411	$23	$355	15.2
4725	2855	$163	$1,647	10.1	0	$0	$0	N/A	274	$16	$298	19.1
4726	623	$35	$1,846	52.0	249	$14	$611	43.0	899	$51	$1,661	32.4
4727	833	$47	$983	20.7	452	$26	$1,108	43.0	824	$47	$785	16.7
4728	601	$34	$710	20.7	463	$26	$1,136	43.0	597	$34	$568	16.7
4729	686	$39	$809	20.7	498	$28	$1,221	43.0	970	$55	$923	16.7
473	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
4924	0	$0	$0	N/A	480	$27	$114	4.1	0	$0	$0	N/A
501	29	$2	$14	8.6	0	$0	$0	N/A	21	$1	$14	12.1

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
5104	0	$0	$0	N/A	0	$0	$0	N/A	237	$13	$170	12.6
5105	0	$0	$0	N/A	0	$0	$0	N/A	62	$4	$21	6.0
5125	824	$47	$241	5.1	898	$51	$213	4.2	675	$38	$213	5.5
519A	119	$7	$44	6.5	0	$0	$0	N/A	118	$7	$44	6.6
520	0	$0	$0	N/A	64	$4	$57	15.6	152	$9	$57	6.6
5207	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
5225	589	$34	$170	5.1	360	$21	$85	4.1	685	$39	$213	5.5
5226	603	$34	$185	5.4	534	$30	$128	4.2	386	$22	$128	5.8
523	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
531	0	$0	$0	N/A	1483	$85	$533	6.3	0	$0	$0	N/A
532	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
533	0	$0	$0	N/A	0	$0	$0	N/A	114	$6	$43	6.6
5425	993	$57	$298	5.3	715	$41	$170	4.2	1050	$60	$341	5.7
5426	562	$32	$170	5.3	1426	$81	$341	4.2	520	$30	$170	5.8

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
5475	2422	$138	$6,560	47.5	2030	$116	$5,231	45.2	1663	$95	$5,964	62.9
5626	507	$29	$476	16.5	454	$26	$383	14.8	408	$23	$355	15.3
5627	231	$13	$639	48.6	165	$9	$383	40.7	403	$23	$735	32.0
5675	502	$29	$383	13.4	0	$0	$0	N/A	318	$18	$341	18.8
571	1622	$92	$4,496	48.6	3683	$210	$8,556	40.7	3281	$187	$5,982	32.0
5974	527	$30	$170	5.7	649	$37	$170	4.6	245	$14	$85	6.1
5975	766	$44	$249	5.7	486	$28	$128	4.6	854	$49	$298	6.1
5976	0	$0	$0	N/A	738	$42	$178	4.2	834	$48	$284	6.0
5978	442	$25	$153	6.1	1440	$82	$383	4.7	341	$19	$128	6.6
5979	2126	$121	$682	5.6	325	$19	$85	4.6	1978	$113	$682	6.0
5980	2126	$121	$682	5.6	1300	$74	$341	4.6	1978	$113	$682	6.0
5981	0	$0	$0	N/A	2859	$163	$767	4.7	0	$0	$0	N/A
5982	242	$14	$85	6.2	2548	$145	$682	4.7	444	$25	$170	6.7
5983	239	$14	$85	6.3	2224	$127	$596	4.7	656	$37	$256	6.8
5984	239	$14	$85	6.3	2859	$163	$767	4.7	656	$37	$256	6.8
5985	2096	$119	$738	6.2	0	$0	$0	N/A	2222	$127	$852	6.7

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
612A	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
614	134	$8	$85	11.2	0	$0	$0	N/A	266	$15	$170	11.2
614	134	$8	$85	11.2	0	$0	$0	N/A	266	$15	$170	11.2
6178	247	$14	$85	6.1	0	$0	$0	N/A	343	$20	$160	8.2
6179	106	$6	$99	16.4	562	$32	$497	15.5	341	$19	$398	20.5
619	0	$0	$0	N/A	0	$0	$0	N/A	417	$24	$170	7.2
6203	574	$33	$170	5.2	0	$0	$0	N/A	532	$30	$170	5.6
6205	0	$0	$0	N/A	720	$41	$170	4.1	0	$0	$0	N/A
622	229	$13	$85	6.5	0	$0	$0	N/A	227	$13	$85	6.6
623	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
624	106	$6	$57	9.4	0	$0	$0	N/A	0	$0	$0	N/A
625	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
6325	279	$16	$256	16.1	581	$33	$511	15.4	198	$11	$256	22.6
639	0	$0	$0	N/A	48	$3	$43	15.6	0	$0	$0	N/A

SiteID	E kWh savings	E energy cost savings	E measure cost	SPB	S kWh savings	S energy cost savings	S measure cost	SPB	W kWh savings	W energy cost savings	W measure cost	SPB
6501	491	$28	$142	5.1	0	$0	$0	N/A	1141	$65	$355	5.5
6525	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
6526	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
6527	154	$9	$50	5.7	1027	$59	$249	4.2	0	$0	$0	N/A
6575	2859	$163	$859	5.3	314	$18	$128	7.1	47	$3	$21	8.0
671	3671	$209	$4,496	21.5	7461	$425	$8,556	20.1	4133	$236	$5,982	25.4
684	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
6870	354	$20	$114	5.6	0	$0	$0	N/A	330	$19	$114	6.0
6925	418	$24	$320	13.4	1017	$58	$746	12.9	298	$17	$320	18.8
6926	569	$32	$288	8.9	89	$5	$43	8.4	451	$26	$298	11.6
6928	309	$18	$170	9.7	481	$27	$199	7.3	248	$14	$149	10.5
6951	0	$0	$0	N/A	0	$0	$0	N/A	0	$0	$0	N/A
Total	100137	$5,708	$68,558	12.0	118158	$6,735	$72,329	10.7	85161	$4,854	$65,379	13.5

Appendix I: Facility Wide Savings for HVAC Upgrade Measure

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1280	1280ACHPS01-X	R	36000	5976	1767	5,301	$302	$276	0.9
1280	1280ACHPS02-X	R	36000	5976	1767	5,301	$302	$276	0.9
1280	1280ACHPS03-X	R	35000	5976	1767	5,154	$294	$268	0.9
1280	1280ACHPS04-X	R	36000	5976	1767	5,301	$302	$276	0.9
1280	1280ACHPS05-X	R	36000	5976	1767	5,301	$302	$276	0.9
1280	1280ACHPS06-X	R	36000	5976	1767	5,301	$302	$276	0.9
1280	1280ACHPS07-X	R	48000	5976	1767	7,068	$403	$368	0.9
1280	1280ACHPS08-X	R	24000	5976	1767	3,534	$201	$184	0.9
1401	1401ACS01-X	HP	24000	5976	1767	3,534	$201	$184	0.9
1401	1401ACS02-X	HP	42000	5976	1767	6,185	$353	$322	0.9
1401	1401ACS03-X	HP	120000	5976	1767	17,670	$1,007	$920	0.9
1401	1401ACS04-X	HP	120000	5976	1767	17,670	$1,007	$920	0.9
1401	1401ACS05-X	HP	120000	5976	1767	17,670	$1,007	$920	0.9
1401	1401ACS06-X	HP	120000	5976	1767	17,670	$1,007	$920	0.9
1401	1401ACS07-X	HP	120000	5976	1767	17,670	$1,007	$920	0.9
1401	1401ACS08-X	HP	36000	2701	1082	3,246	$185	$276	1.5
1401	1401ACS09-X	HP	36000	2701	1082	3,246	$185	$276	1.5
1401	1401ACS10-X	HP	24000	2701	1082	2,164	$123	$184	1.5
1401	1401ACU01-1		6000	2701	1082	541	$31	$46	1.5
1403	1403ACS01-X	HP	24000	2627	569	1,138	$65	$184	2.8
1403	1403ACS02-X	HP	24000	2627	569	1,138	$65	$184	2.8
1403	1403ACS03-X	HP	24000	2627	569	1,138	$65	$184	2.8
1403	1403ACS04-X	HP	24000	2627	569	1,138	$65	$184	2.8
1403	1403ACS05-X	HP	36000	2627	569	1,707	$97	$276	2.8
1403	1403ACS06-X	HP	36000	2627	569	1,707	$97	$276	2.8
1403	1403ACS07-X	HP	30000	2627	569	1,423	$81	$230	2.8
1403	1403ACS08-X	HP	30000	2627	569	1,423	$81	$230	2.8
1403	1403ACS09-X	HP	30000	2627	569	1,423	$81	$230	2.8
1403	1403ACS10-X	HP	35400	2627	526	1,552	$88	$271	3.1
1405	1405ACS11		6000	2627	526	263	$15	$46	3.1
1481	1481ACHPS01-X	R	6000	2627	526	263	$15	$46	3.1
1481	1481ACHPS02-X	R	47000	2627	526	2,060	$117	$360	3.1
1481	1481ACHPS03-X	R	47000	2627	526	2,060	$117	$360	3.1
1481	1481ACHPS04-X	R	6000	2627	526	263	$15	$46	3.1
1481	1481ACHPS05-X	R	36000	4128	501	1,503	$86	$276	3.2
1481	1481ACHPS06-X	R	36000	4128	501	1,503	$86	$276	3.2

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1481	1481ACHPS07-X	R	36000	4128	501	1,503	$86	$276	3.2
1481	1481ACHPS08-X	R	35400	4128	501	1,478	$84	$271	3.2
1481	1481ACHPS09-X	R	35400	4128	501	1,478	$84	$271	3.2
1481	1481ACS01		35400	4128	501	1,478	$84	$271	3.2
1492	1492ACS01-X	R	35400	4128	501	1,478	$84	$271	3.2
1492	1492ACS02-X	R	35400	4128	501	1,478	$84	$271	3.2
1526	1526ACS01-X	R	35400	4128	501	1,478	$84	$271	3.2
1526	1526ACS02-X	R	93000	4128	501	3,883	$221	$713	3.2
1578	1578ACHPS01-X	HP	48000	4128	501	2,004	$114	$368	3.2
1578	1578ACHPS02-X	HP	48000	4128	501	2,004	$114	$368	3.2
1578	1578ACHPS03-X	HP	14000	1602	449	524	$30	$107	3.6
1578	1578ACHPS04-X	HP	9700	1602	449	363	$21	$74	3.6
1578	1578ACHPS05-X	HP	35400	1602	449	1,325	$75	$271	3.6
1578	1578ACHPS06-X	HP	35400	1602	449	1,325	$75	$271	3.6
1578	1578ACHPS07-X	HP	35400	1602	449	1,325	$75	$271	3.6
1578	1578ACHPS08-X	HP	35400	1602	449	1,325	$75	$271	3.6
1578	1578ACHPS09-X	HP	33600	1602	449	1,257	$72	$258	3.6
1601	1601ACS01-X	R	33600	1602	449	1,257	$72	$258	3.6
1601	1601ACS02-X	R	33600	1602	449	1,257	$72	$258	3.6
1602	1602ACHPS01-X	R	30200	1602	449	1,130	$64	$232	3.6
1602	1602ACHPS02-X	R	13500	1602	449	505	$29	$104	3.6
1602	1602ACHPS03-X	R	60000	1602	449	2,245	$128	$460	3.6
1677	1677ACHPS01-X		60000	1602	449	2,245	$128	$460	3.6
1677	1677ACHPS03-X		240000	1602	449	8,980	$512	$1,840	3.6
1677	1677ACHPS04-X		240000	1602	449	8,980	$512	$1,840	3.6
1677	1677ACHPS05-X		35000	1602	449	1,310	$75	$268	3.6
1677	1677ACHPS06-X		12000	1602	449	449	$26	$92	3.6
1677	1677ACHPS07-X		36000	1602	449	1,347	$77	$276	3.6
1677	1677ACHPS08-X		36000	1602	449	1,347	$77	$276	3.6
1677	1677ACHPS09-X		36000	1602	449	1,347	$77	$276	3.6
1677	1677ACHPS10-X		36000	1602	449	1,347	$77	$276	3.6
1677	1677ACHPS11-X		48500	1602	449	1,815	$103	$372	3.6
1677	1677ACU01-1	NONE	12000	1602	449	449	$26	$92	3.6
1677	1677ACU05-3		47000	1602	448	1,755	$100	$360	3.6
1677	1677ACU06-3		36000	1602	448	1,344	$77	$276	3.6
1677	1677ACU07-3		36000	1602	448	1,344	$77	$276	3.6
1677	1677RCUA03-3		36000	1602	448	1,344	$77	$276	3.6
1678	1678ACHPS01-X		24000	4727	410	820	$47	$184	3.9
1678	1678ACHPS02-X		42000	4727	410	1,435	$82	$322	3.9
1678	1678ACHPS03-X		48000	4727	410	1,640	$93	$368	3.9

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1678	1678ACHPS04-X		48000	4727	410	1,640	$93	$368	3.9
1678	1678ACHPS05-X		24000	4727	410	820	$47	$184	3.9
1680	1680ACHPS01-X	R	24000	4727	410	820	$47	$184	3.9
1680	1680ACHPS02-X	R	24000	4727	410	820	$47	$184	3.9
1680	1680ACHPS03-X	R	24000	4727	410	820	$47	$184	3.9
1680	1680ACHPS04-X	R	24000	4727	410	820	$47	$184	3.9
1680	1680ACHPS05-X	R	24000	4727	410	820	$47	$184	3.9
1680	1680ACHPS06-X	R	24000	4727	410	820	$47	$184	3.9
1680	1680ACS01		24000	4727	410	820	$47	$184	3.9
1713	1713ACS01-X	R	24000	4727	410	820	$47	$184	3.9
1727	1727ACHPS06-X		24000	4727	410	820	$47	$184	3.9
1727	1727ACS01-X	R	24000	4727	410	820	$47	$184	3.9
1730	1730ACS01-X	R	24000	4727	410	820	$47	$184	3.9
1730	1730ACS02-X	R	48000	4727	410	1,640	$93	$368	3.9
1730	1730ACS03-X	R	42000	4727	410	1,435	$82	$322	3.9
1735	1735ACHPS01-X	HP	24000	4727	410	820	$47	$184	3.9
1735	1735ACHPS02-X	HP	24000	4727	410	820	$47	$184	3.9
1735	1735ACHPS03-X	HP	24000	4727	410	820	$47	$184	3.9
1739	1739ACHPS01-X	HP	24000	4727	410	820	$47	$184	3.9
1739	1739ACHPS02-X	HP	36000	4727	410	1,230	$70	$276	3.9
1739	1739ACHPS03-X	HP	36000	4727	410	1,230	$70	$276	3.9
1739	1739ACHPS04-X	HP	18000	4727	410	615	$35	$138	3.9
1739	1739ACHPS05-X	HP	18000	4727	410	615	$35	$138	3.9
1739	1739ACHPS06-X	HP	18000	4727	410	615	$35	$138	3.9
1739	1739ACHPS07-X	HP	36000	4727	410	1,230	$70	$276	3.9
1739	1739ACU01-1	NONE	36000	4727	410	1,230	$70	$276	3.9
1826	1826ACHPS01-X	HP	36000	4727	410	1,230	$70	$276	3.9
1826	1826ACHPS02-X	HP	36000	1886	387	1,161	$66	$276	4.2
1826	1826ACHPS05-X	HP	36000	1886	387	1,161	$66	$276	4.2
1826	1826ACHPS06-X	HP	36000	1886	387	1,161	$66	$276	4.2
1826	1826ACHPS07-X	HP	18600	1886	387	600	$34	$143	4.2
1826	1826ACHPS09-X	HP				272,535	$15,534	$32,834	2.1
1826	1826ACU01-1X		31200	1735	376	978	$56	$239	4.3
1830	1830ACS01-X	R	31200	1735	376	978	$56	$239	4.3
1830	1830ACS02-X	R	31200	1735	376	978	$56	$239	4.3
1830	1830ACS03-X	R	31200	1735	376	978	$56	$239	4.3
1830	1830ACS04-X	R	31200	1735	376	978	$56	$239	4.3
1830	1830ACS05-X	R	31200	1735	376	978	$56	$239	4.3
1830	1830ACS06-X	R	31200	1735	376	978	$56	$239	4.3
1830	1830ACS07-X	R	31200	1735	376	978	$56	$239	4.3

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1830	1830ACS08-X	R	35000	1735	376	1,097	$63	$268	4.3
1830	1830ACS09-X	R	35000	1735	376	1,097	$63	$268	4.3
1879	1879ACHPS01-X	HP	35000	1735	376	1,097	$63	$268	4.3
1879	1879ACUW01		35000	1735	376	1,097	$63	$268	4.3
1879	1879ACUW02		35000	1735	376	1,097	$63	$268	4.3
1884	1884ACHPS01-X	HP	35000	1735	376	1,097	$63	$268	4.3
1884	1884ACHPS02-X	HP	35000	1735	376	1,097	$63	$268	4.3
1884	1884ACHPS03-X	HP	31200	1735	376	978	$56	$239	4.3
1884	1884ACHPS04-X	HP	31200	1735	376	978	$56	$239	4.3
1885	1885ACHPS01-X	HP	31200	1735	376	978	$56	$239	4.3
1885	1885ACHPS02-X	HP	31200	1735	376	978	$56	$239	4.3
1885	1885ACHPS03-X	HP	31200	1735	376	978	$56	$239	4.3
1885	1885ACHPS04-X	HP	31200	1735	376	978	$56	$239	4.3
1885	1885ACHPS05-X	HP	31200	1735	376	978	$56	$239	4.3
1885	1885ACHPS06-X	HP	47000	1735	376	1,473	$84	$360	4.3
1886	1886ACHPS01-X	HP	47000	1735	376	1,473	$84	$360	4.3
1886	1886ACHPS02-X	HP	17500	1735	376	548	$31	$134	4.3
1886	1886ACHPS03-X	HP	31200	1735	376	978	$56	$239	4.3
1886	1886ACHPS04-X	HP	31200	1735	376	978	$56	$239	4.3
1887	1887ACHPS01-X		31200	1735	376	978	$56	$239	4.3
1887	1887ACHPS02-X		31200	1735	376	978	$56	$239	4.3
1887	1887ACHPS03-X		31200	1735	376	978	$56	$239	4.3
1887	1887ACHPS04-X		31200	1735	376	978	$56	$239	4.3
1887	1887ACHPS05-X		31200	1735	376	978	$56	$239	4.3
1887	1887ACHPS06-X		31200	1735	376	978	$56	$239	4.3
1887	1887ACHPS07-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS01-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS02-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS03-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS04-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS05-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS06-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS07-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS08-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS09-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS10-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS11-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS12-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS13-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS14-X	HP	31200	1735	376	978	$56	$239	4.3

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1888	1888ACHPS15-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS16-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS17-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS18-X	HP	31200	1735	376	978	$56	$239	4.3
1888	1888ACHPS19-X	HP	31200	1735	376	978	$56	$239	4.3
1889	1889ACHPS01-X	HP	31200	1735	376	978	$56	$239	4.3
1889	1889ACHPS02-X	HP	31200	1735	376	978	$56	$239	4.3
1889	1889ACHPS03-X	HP	31200	1735	376	978	$56	$239	4.3
1889	1889ACHPS04-X	HP	31200	1735	376	978	$56	$239	4.3
1889	1889ACHPS05-X	HP	31200	1735	376	978	$56	$239	4.3
1889	1889ACHPS06-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS07-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS08-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS09-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS10-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS11-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS12-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS13-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS14-X	HP	35200	1735	376	1,103	$63	$270	4.3
1889	1889ACHPS15-X	HP	30000	1735	376	940	$54	$230	4.3
1889	1889ACHPS16-X	HP	30000	1735	376	940	$54	$230	4.3
1889	1889ACHPS17-X	HP	36000	1735	376	1,128	$64	$276	4.3
1889	1889ACHPS18-X	HP	36000	1735	376	1,128	$64	$276	4.3
1889	1889ACHPS19-X	HP	36000	1735	376	1,128	$64	$276	4.3
1889	1889ACHPS20-X	HP	36000	1735	376	1,128	$64	$276	4.3
1889	1889ACHPS21-X	HP	36000	1735	376	1,128	$64	$276	4.3
1925	1925ACS01		36000	1735	376	1,128	$64	$276	4.3
1925	1925ACS02		36000	1735	376	1,128	$64	$276	4.3
1925	1925ACS03		36000	1735	376	1,128	$64	$276	4.3
194A	194AACHPS01-X	HP	36000	1735	376	1,128	$64	$276	4.3
198	198ACUW01		36000	1735	376	1,128	$64	$276	4.3
198	198ACUW02		36000	1735	376	1,128	$64	$276	4.3
198	198ACUW03-X		24000	1735	376	752	$43	$184	4.3
198	198ACUW04		36000	1735	376	1,128	$64	$276	4.3
2128	2128ACS02-X	R	36000	1735	376	1,128	$64	$276	4.3
2177	2177ACHPS01-X	HP	36000	1735	376	1,128	$64	$276	4.3
2177	2177ACHPS03-X	HP	36000	1735	376	1,128	$64	$276	4.3
2177	2177ACU01-1H		36000	1735	376	1,128	$64	$276	4.3
2177	2177ACUW01-HX		36000	1735	376	1,128	$64	$276	4.3
2180	2180ACS01-X		36000	1735	376	1,128	$64	$276	4.3

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
2180	2180ACS02-X		36000	1735	376	1,128	$64	$276	4.3
2180	2180ACS03-X		30000	1735	376	940	$54	$230	4.3
2180	2180ACS04-X	R	36000	1735	376	1,128	$64	$276	4.3
2525	2525ACS01-X	R	36000	1735	376	1,128	$64	$276	4.3
2525	2525ACS02-X	R	36000	1735	376	1,128	$64	$276	4.3
2525	2525ACS03-X	R	36000	1735	376	1,128	$64	$276	4.3
2580	2580ACHPS01		36000	1735	376	1,128	$64	$276	4.3
2580	2580ACHPS02		36000	1735	376	1,128	$64	$276	4.3
2580	2580ACHPS03		36000	1735	376	1,128	$64	$276	4.3
2625	2625ACUW01		36000	1735	376	1,128	$64	$276	4.3
2625	2625ACUW02		36000	1735	376	1,128	$64	$276	4.3
2627	2627ACS01-X	R	36000	1735	376	1,128	$64	$276	4.3
2627	2627ACS02-X	R	36000	1735	376	1,128	$64	$276	4.3
2627	2627ACS03-X	R	36000	1735	376	1,128	$64	$276	4.3
2627	2627ACS04-X	R	36000	1735	376	1,128	$64	$276	4.3
2632	2632ACS01		36000	1735	376	1,128	$64	$276	4.3
2632	2632ACS02		36000	1735	376	1,128	$64	$276	4.3
2679	2679ACHPS03-X	HP	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACHPS07-X	HP	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACHPS09	HP	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACS02-X	R	30000	1735	376	940	$54	$230	4.3
2679	2679ACS03-X	R	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACS04-X	R	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACS06-X	R	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACS08-X	R	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACS12-X	R	36000	1735	376	1,128	$64	$276	4.3
2679	2679ACS15-X	R	30000	1735	376	940	$54	$230	4.3
2679	2679ACS16-X	R	24000	1735	376	752	$43	$184	4.3
2679	2679ACS18		30000	1735	376	940	$54	$230	4.3
2684	2684ACS03-X	R	30000	1735	376	940	$54	$230	4.3
2684	2684ACS06-X	R	30000	1735	376	940	$54	$230	4.3
2684	2684ACS07-X	R	30000	1735	376	940	$54	$230	4.3
2684	2684ACS09-X		36000	1735	376	1,128	$64	$276	4.3
2685	2685ACHPS01-X	R	36000	1735	376	1,128	$64	$276	4.3
2685	2685ACHPS02-X		36000	1735	376	1,128	$64	$276	4.3
2685	2685ACHPS04-X		30000	1735	376	940	$54	$230	4.3
2685	2685ACHPS05-X		16500	1735	376	517	$29	$127	4.3
2685	2685ACHPS06-X		36000	1735	376	1,128	$64	$276	4.3
2687	2687ACHPS01-X		36000	1735	376	1,128	$64	$276	4.3
2687	2687ACHPS03-X		36000	1735	376	1,128	$64	$276	4.3

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
2701	2701ACS01-X	R	36000	1735	376	1,128	$64	$276	4.3
2726	2726ACHPS02-X	HP	36000	1735	376	1,128	$64	$276	4.3
2726	2726ACUW01		36000	1735	376	1,128	$64	$276	4.3
2727	2727ACS02-X	R	36000	1735	376	1,128	$64	$276	4.3
2727	2727ACS03-X	R	36000	1735	376	1,128	$64	$276	4.3
2728	2728ACHPS01-X	HP	36000	1735	376	1,128	$64	$276	4.3
2728	2728ACHPS02-X	HP	35200	1735	376	1,103	$63	$270	4.3
2728	2728ACHPS03-X	HP	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACHPS01		35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS01-X	R	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS02-X	R	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS04-X	R	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS09-X	R	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS12-X	R	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS13-X	R	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS14-X	R	35200	1735	376	1,103	$63	$270	4.3
2775	2775ACS15-X	R	35200	1735	376	1,103	$63	$270	4.3
2787	2787ACS01		35200	1735	376	1,103	$63	$270	4.3
2801	2801ACS01-X	R	35200	1735	376	1,103	$63	$270	4.3
2801	2801ACS02-X	R	46500	1735	376	1,457	$83	$357	4.3
2801	2801ACS03-X	R	36000	1735	376	1,128	$64	$276	4.3
2802	2802ACS01-X	R	36000	1735	376	1,128	$64	$276	4.3
2802	2802ACS02-X	R	36000	1735	376	1,128	$64	$276	4.3
2802	2802ACS03-X	R	23000	1735	376	721	$41	$176	4.3
2808	2808ACS01		22600	1735	376	708	$40	$173	4.3
2825	2825ACHPS02-X	HP	23000	1735	376	721	$41	$176	4.3
2825	2825ACHPS03-X	HP	23000	1735	376	721	$41	$176	4.3
2825	2825ACHPS04-X	HP	23000	1735	376	721	$41	$176	4.3
2825	2825ACHPS05-X	HP	23000	1735	376	721	$41	$176	4.3
2825	2825ACHPS06-X	HP	23000	1735	376	721	$41	$176	4.3
2825	2825ACHPS07-X	HP	23000	1735	376	721	$41	$176	4.3
2825	2825ACHPS08-X	HP	29000	1735	376	909	$52	$222	4.3
2925	2925ACHPS02	HP	36000	3725	362	1,086	$62	$276	4.5
2925	2925ACHPS03	HP	36000	3725	362	1,086	$62	$276	4.5
2925	2925ACUW01		35000	3725	362	1,056	$60	$268	4.5
3180	3180ACHPS03-X	HP	24600	3725	362	742	$42	$189	4.5
3180	3180ACHPS06-X	HP	24600	3725	362	742	$42	$189	4.5
3180	3180ACU01		92000	3725	362	2,775	$158	$705	4.5
3180	3180ACUW01		35000	3725	362	1,056	$60	$268	4.5
3180	3180ACUW02		35200	3725	362	1,062	$61	$270	4.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
3180	3180ACUW03		35200	3725	362	1,062	$61	$270	4.5
3180	3180ACUW04		35200	3725	362	1,062	$61	$270	4.5
3180	3180RCUA01		35200	3725	362	1,062	$61	$270	4.5
3203	3203ACHPS01	HP	35200	3725	362	1,062	$61	$270	4.5
3203	3203ACHPS02	HP	35200	3725	362	1,062	$61	$270	4.5
3204	3204ACS01	R	60000	1735	273	1,365	$78	$460	5.9
3204	3204ACS02	R	35400	1735	273	805	$46	$271	5.9
3226	3226ACHPS01		35400	1735	273	805	$46	$271	5.9
3226	3226ACHPS02		35400	1735	273	805	$46	$271	5.9
3226	3226ACHPS04		35400	1735	273	805	$46	$271	5.9
328	328ACUW01-X		35400	1735	273	805	$46	$271	5.9
3427	3427ACHPS01-X	HP	35400	1735	273	805	$46	$271	5.9
3427	3427ACHPS02-X	HP	35400	1735	273	805	$46	$271	5.9
3427	3427ACHPS03-X	HP	35400	1735	273	805	$46	$271	5.9
3427	3427ACHPS04-X	HP	48500	1735	273	1,103	$63	$372	5.9
3427	3427ACHPS05-X	HP	35000	1735	273	796	$45	$268	5.9
3427	3427ACS01		35000	1735	273	796	$45	$268	5.9
3520	3520ACS01	R	35000	1735	273	796	$45	$268	5.9
3520	3520ACS02	R	35000	1735	273	796	$45	$268	5.9
3520	3520ACS03	R	34800	1735	273	792	$45	$267	5.9
3520	3520ACS04	R	42000	1735	273	956	$54	$322	5.9
3520	3520ACS05	R	42000	1735	273	956	$54	$322	5.9
3520	3520ACS07	R	56000	1735	273	1,274	$73	$429	5.9
3520	3520ACS11	R	42000	1735	273	956	$54	$322	5.9
3520	3520ACS12	R	56000	1735	273	1,274	$73	$429	5.9
3520	3520ACS13	R	56000	1735	273	1,274	$73	$429	5.9
3520	3520ACS14	R	42000	1735	273	956	$54	$322	5.9
3526	3526ACHPS01-X	HP	42000	1735	273	956	$54	$322	5.9
3526	3526ACHPS02-X	HP	41000	1735	273	933	$53	$314	5.9
3526	3526ACHPS03-X	HP	41000	1735	273	933	$53	$314	5.9
3527	3527ACHPS01-X		41000	1735	273	933	$53	$314	5.9
3527	3527ACHPS02-X		41000	1735	273	933	$53	$314	5.9
3527	3527ACHPS03-X		41000	1735	273	933	$53	$314	5.9
3527	3527ACHPS04-X		60000	1735	273	1,365	$78	$460	5.9
3527	3527ACHPS05-X		35400	1735	273	805	$46	$271	5.9
3527	3527ACHPS06-X		18200	1735	273	414	$24	$140	5.9
3527	3527ACHPS07-X		30000	1735	273	683	$39	$230	5.9
3527	3527ACHPS08-X		30000	1735	273	683	$39	$230	5.9
3527	3527ACHPS09-X		30000	1735	273	683	$39	$230	5.9
3527	3527ACHPS10-X		35400	1735	273	805	$46	$271	5.9

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
3527	3527ACHPS11-X		35400	1735	273	805	$46	$271	5.9
3527	3527ACHPS12-X		35400	1735	273	805	$46	$271	5.9
3577	3577ACHPS01-X		35400	1735	273	805	$46	$271	5.9
3577	3577ACHPS02-X		35400	1735	273	805	$46	$271	5.9
3577	3577ACHPS04-X		35400	1735	273	805	$46	$271	5.9
3577	3577ACHPS05-X	HP	35400	1735	273	805	$46	$271	5.9
3577	3577ACUW01		90000	1735	273	2,048	$117	$690	5.9
367	367ACUW03		60000	1735	273	1,365	$78	$460	5.9
3703	3703ACHPS01-X	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACHPS02-X	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACHPS03-X	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACHPS04-X	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACHPS05-X	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACHPS07-X	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACHPS10-X	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACS11	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACS12	R	28000	1735	273	637	$36	$215	5.9
3703	3703ACS13		28000	1735	273	637	$36	$215	5.9
3703	3703ACS14	R	28000	1735	273	637	$36	$215	5.9
3726	3726ACS49-X		23000	1735	273	523	$30	$176	5.9
3751	3751ACHPS01-X	R	23000	1735	273	523	$30	$176	5.9
3751	3751ACHPS03-X	HP	23000	1735	273	523	$30	$176	5.9
376	376ACS01-X	R	23000	1735	273	523	$30	$176	5.9
376	376ACS02-X	R	23000	1735	273	523	$30	$176	5.9
3775	3775ACHPS01-X	HP	23000	1735	273	523	$30	$176	5.9
3775	3775ACHPS02-X	HP	23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS01		23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS02	R	23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS03	R	23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS04	R	12000	1735	273	273	$16	$92	5.9
3777	3777ACHPS05	R	23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS06	R	23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS07	R	23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS08-X	R	23000	1735	273	523	$30	$176	5.9
3777	3777ACHPS09		23000	1735	273	523	$30	$176	5.9
379	379ACHPS01	HP	23000	1735	273	523	$30	$176	5.9
379	379ACHPS02	HP	23000	1735	273	523	$30	$176	5.9
379	379ACS01-X		23000	1735	273	523	$30	$176	5.9
382	382ACU01-X		23000	1735	273	523	$30	$176	5.9
3925	3925ACS01	R	23000	1735	273	523	$30	$176	5.9

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
3925	3925ACS02	R	24000	1735	273	546	$31	$184	5.9
3925	3925ACS03	R	22600	1735	273	514	$29	$173	5.9
4107	4107ACS01-X	R	36000	1735	273	819	$47	$276	5.9
4161	4161ACS01-X	R	36000	1735	273	819	$47	$276	5.9
4161	4161ACS02-X	R	36000	1735	273	819	$47	$276	5.9
4180	4180ACHPS01-X	HP	36000	1735	273	819	$47	$276	5.9
4180	4180ACHPS02-X	HP	36000	1735	273	819	$47	$276	5.9
4180	4180ACHPS03-X	HP	36000	1735	273	819	$47	$276	5.9
4180	4180ACUW01		43000	1735	273	978	$56	$330	5.9
4180	4180ACUW02-X		43000	1735	273	978	$56	$330	5.9
4184	4184ACHPS02-X	HP	36000	1735	273	819	$47	$276	5.9
4184	4184ACHPS03-X	HP	36000	1735	273	819	$47	$276	5.9
4184	4184ACHPS05-X	HP	36000	1735	273	819	$47	$276	5.9
4302	4302ACHPS04-X	R	36000	1735	273	819	$47	$276	5.9
4302	4302ACS03-X	R	36000	1735	273	819	$47	$276	5.9
4302	4302ACS04-X	R	36000	1735	273	819	$47	$276	5.9
4302	4302ACS05-X	R	12000	1735	273	273	$16	$92	5.9
4302	4302ACUW26		35200	1735	273	801	$46	$270	5.9
4316	4316ACUW01		35200	1735	273	801	$46	$270	5.9
4316	4316ACUW02		35200	1735	273	801	$46	$270	5.9
4325	4325ACHPS01-X		35200	1735	273	801	$46	$270	5.9
4325	4325ACHPS02-X		35200	1735	273	801	$46	$270	5.9
4325	4325ACHPS03-X		35200	1735	273	801	$46	$270	5.9
4377	4377ACS01-X	R	18000	1735	273	410	$23	$138	5.9
4377	4377ACS02-X	R	18000	1735	273	410	$23	$138	5.9
4377	4377ACS03-X	R	18000	1735	273	410	$23	$138	5.9
4377	4377ACS04-X	R	18000	1735	273	410	$23	$138	5.9
4377	4377ACS06-X	R	18000	1735	273	410	$23	$138	5.9
4383	4383ACU02-1	NONE	18000	1735	273	410	$23	$138	5.9
4383	4383ACU03-1	NONE	18000	1735	273	410	$23	$138	5.9
4384	4384ACS03-X	R	18000	1735	273	410	$23	$138	5.9
4385	4385ACHPS01-X	HP	30200	1735	273	687	$39	$232	5.9
4385	4385ACHPS02-X	HP	48000	1735	273	1,092	$62	$368	5.9
4385	4385ACHPS03-X	HP	48000	1735	273	1,092	$62	$368	5.9
4385	4385ACHPS04-X	HP	48000	1735	273	1,092	$62	$368	5.9
4385	4385ACHPS05-X	HP	48000	1735	273	1,092	$62	$368	5.9
4385	4385ACHPS06-X	HP	48000	1735	273	1,092	$62	$368	5.9
4406	4406ACS01	R	48000	1735	273	1,092	$62	$368	5.9
4406	4406ACS02	R	58500	1735	273	1,331	$76	$449	5.9
4406	4406ACS03	R	48000	1735	273	1,092	$62	$368	5.9

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
4406	4406ACS04	R	48000	1735	273	1,092	$62	$368	5.9
4407	4407ACUW01		48000	1735	273	1,092	$62	$368	5.9
4407	4407ACUW02		48000	1735	273	1,092	$62	$368	5.9
4442	4442ACHPS01-X	R	48000	1735	273	1,092	$62	$368	5.9
4442	4442ACHPS02-X	R	48000	1735	273	1,092	$62	$368	5.9
4442	4442ACHPS03-X	R	48000	1735	273	1,092	$62	$368	5.9
4442	4442ACHPS04-X	R	48000	1735	273	1,092	$62	$368	5.9
4442	4442ACHPS05-X	R	48000	1735	273	1,092	$62	$368	5.9
4442	4442ACHPS06-X	HP	36000	1735	273	819	$47	$276	5.9
4442	4442ACHPS07-X	R	36000	1735	273	819	$47	$276	5.9
4442	4442ACHPS08-X	R	36000	1735	273	819	$47	$276	5.9
4475	4475ACHPS01	HP	29600	1735	273	673	$38	$227	5.9
4475	4475ACHPS02	HP	29600	1735	273	673	$38	$227	5.9
4509	4509ACU01-1H		12000	1735	273	273	$16	$92	5.9
4525	4525ACHPS01	HP	6000	1735	273	137	$8	$46	5.9
4525	4525ACHPS02	HP	24000	1735	273	546	$31	$184	5.9
4525	4525ACHPS03	HP	24000	1735	273	546	$31	$184	5.9
4525	4525ACHPS04	HP	24000	1735	273	546	$31	$184	5.9
4525	4525ACHPS05	HP	35200	1735	273	801	$46	$270	5.9
4576	4576ACHPS01-X	HP	35200	1735	273	801	$46	$270	5.9
4675	4675ACHPS02-X	HP	35200	1735	273	801	$46	$270	5.9
4675	4675ACHPS03-X	HP	24000	1735	273	546	$31	$184	5.9
4675	4675ACHPS07-X	HP	24000	1735	273	546	$31	$184	5.9
4675	4675ACHPS09	HP	24000	1735	273	546	$31	$184	5.9
4675	4675ACHPS10	HP	24000	1735	273	546	$31	$184	5.9
4675	4675ACHPS11	HP	24000	1735	273	546	$31	$184	5.9
4675	4675ACHPS12	HP	24000	1735	273	546	$31	$184	5.9
4675	4675ACHPS13	HP	36000	1735	273	819	$47	$276	5.9
4675	4675ACHPS14	HP	36000	1735	273	819	$47	$276	5.9
4675	4675ACHPS17-X	HP	36000	1735	273	819	$47	$276	5.9
4675	4675ACHPS18-X	HP	36000	1735	273	819	$47	$276	5.9
4675	4675ACHPS19-X	HP	36000	1735	273	819	$47	$276	5.9
4725	4725ACHPS01		12000	1735	273	273	$16	$92	5.9
4725	4725ACHPS02		12000	1735	273	273	$16	$92	5.9
4725	4725ACHPS03		12000	1735	273	273	$16	$92	5.9
4725	4725ACHPS04		12000	1735	273	273	$16	$92	5.9
4725	4725ACHPS05		12000	1735	273	273	$16	$92	5.9
4725	4725ACS01		35200	1735	273	801	$46	$270	5.9
4725	4725ACS02		35200	1735	273	801	$46	$270	5.9
4725	4725ACS03		35200	1735	273	801	$46	$270	5.9

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
4725	4725ACS04		36000	1735	273	819	$47	$276	5.9
4725	4725ACS05		36000	1735	273	819	$47	$276	5.9
4725	4725ACS06		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS01		38000	1735	273	865	$49	$291	5.9
4726	4726ACHPS02		8000	1735	273	182	$10	$61	5.9
4726	4726ACHPS03		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS04		35200	1735	273	801	$46	$270	5.9
4726	4726ACHPS05		35200	1735	273	801	$46	$270	5.9
4726	4726ACHPS06		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS07		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS08		28500	1735	273	648	$37	$219	5.9
4726	4726ACHPS09		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS10		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS11		6000	1735	273	137	$8	$46	5.9
4726	4726ACHPS12		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS13		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS14		36000	1735	273	819	$47	$276	5.9
4726	4726ACHPS15		6000	1735	273	137	$8	$46	5.9
4726	4726ACHPS16		36000	1735	273	819	$47	$276	5.9
4726	4726ACS01		36000	1735	273	819	$47	$276	5.9
4726	4726ACS02		36000	1735	273	819	$47	$276	5.9
4727	4727ACHPS01		18000	1735	273	410	$23	$138	5.9
4727	4727ACHPS02		18000	1735	273	410	$23	$138	5.9
4727	4727ACHPS03		36000	1735	273	819	$47	$276	5.9
4727	4727ACHPS04		36000	1735	273	819	$47	$276	5.9
4727	4727ACHPS05		36000	1735	273	819	$47	$276	5.9
4727	4727ACHPS06		36000	1735	273	819	$47	$276	5.9
4727	4727ACHPS07		36000	1735	273	819	$47	$276	5.9
4727	4727ACHPS08		36000	1735	273	819	$47	$276	5.9
4727	4727ACHPS09		35600	1735	273	810	$46	$273	5.9
4727	4727ACHPS10		72000	1735	273	1,638	$93	$552	5.9
4728	4728ACHPS01		23000	1735	273	523	$30	$176	5.9
4728	4728ACHPS02		36000	1735	273	819	$47	$276	5.9
4728	4728ACHPS03		29600	1735	273	673	$38	$227	5.9
4728	4728ACHPS04		29600	1735	273	673	$38	$227	5.9
4728	4728ACHPS05		29600	1735	273	673	$38	$227	5.9
4728	4728ACHPS06		29600	1735	273	673	$38	$227	5.9
4728	4728ACHPS07		29600	1735	273	673	$38	$227	5.9
4728	4728ACHPS08		29600	1735	273	673	$38	$227	5.9
4728	4728ACHPS09		29600	1735	273	673	$38	$227	5.9

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
4728	4728ACHPS10		29600	1735	273	673	$38	$227	5.9
4728	4728ACHPS11		36000	1735	273	819	$47	$276	5.9
4728	4728ACHPS12		36000	1735	273	819	$47	$276	5.9
4729	4729ACHPS01		22600	1735	273	514	$29	$173	5.9
4729	4729ACHPS02		22600	1735	273	514	$29	$173	5.9
4729	4729ACHPS03		22600	1735	273	514	$29	$173	5.9
4729	4729ACHPS04		22600	1735	273	514	$29	$173	5.9
4729	4729ACHPS05		22600	1735	273	514	$29	$173	5.9
4729	4729ACHPS06		22600	1735	273	514	$29	$173	5.9
4729	4729ACHPS07		22600	1735	273	514	$29	$173	5.9
4729	4729ACHPS08		22600	1735	273	514	$29	$173	5.9
5105	5105ACUW02-X		22600	1735	273	514	$29	$173	5.9
5125	5125ACS01-X	HP	36000	1735	273	819	$47	$276	5.9
5125	5125ACS02-X	HP	36000	1735	273	819	$47	$276	5.9
5125	5125ACS03-X	HP	36000	1735	273	819	$47	$276	5.9
5125	5125ACS05-X	HP	36000	1735	273	819	$47	$276	5.9
5207	5207ACS01		36000	1735	273	819	$47	$276	5.9
5225	5225ACS01-X	HP	36000	1735	273	819	$47	$276	5.9
5226	5226ACS04-X	HP	24000	1735	273	546	$31	$184	5.9
531	531ACU01-1		23000	1735	273	523	$30	$176	5.9
531	531ACU02-2		36000	1735	273	819	$47	$276	5.9
533	533ACUW01		36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS01-X	HP	36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS02-X	HP	36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS03		36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS06-X	HP	36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS07-X	HP	36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS08-X	HP	36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS09-X	HP	36200	1735	273	824	$47	$278	5.9
5475	5475ACHPS12-X	HP	6000	1886	238	119	$7	$46	6.8
5475	5475ACHPS13-X	HP	6000	1886	238	119	$7	$46	6.8
5475	5475ACHPS13-X	HP	6000	1886	238	119	$7	$46	6.8
5475	5475ACHPS14-X	HP	24000	1886	238	476	$27	$184	6.8
5475	5475ACHPS15-X	HP	18000	1886	238	357	$20	$138	6.8
5475	5475ACHPS16-X	HP	35000	3725	236	688	$39	$268	6.8
5475	5475ACHPS17-X	HP	35000	3725	236	688	$39	$268	6.8
5475	5475ACHPS19-X	HP	35000	3725	236	688	$39	$268	6.8
5475	5475ACHPS20-X	HP	35000	3725	236	688	$39	$268	6.8
5475	5475ACHPS25-X		35000	3725	236	688	$39	$268	6.8
5475	5475ACHPS26-X	HP	35000	3725	236	688	$39	$268	6.8

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
5475	5475ACHPS27-X	HP	35000	3725	236	688	$39	$268	6.8
5475	5475ACS01	R	35400	3725	236	696	$40	$271	6.8
5475	5475ACS02	R	35400	3725	236	696	$40	$271	6.8
5475	5475ACS03	R	35400	3725	236	696	$40	$271	6.8
5475	5475ACU01		35400	3725	236	696	$40	$271	6.8
5626	5626ACFUS01	GAS?	35400	3725	236	696	$40	$271	6.8
5626	5626ACFUS02	GAS?	35400	3725	236	696	$40	$271	6.8
5626	5626ACUW01-X	HP	35400	3725	236	696	$40	$271	6.8
5626	5626ACUW02-X	HP	35400	3725	236	696	$40	$271	6.8
5626	5626ACUW03-X	HP	35400	3725	236	696	$40	$271	6.8
5627	5627ACFUS01		35400	3725	236	696	$40	$271	6.8
5627	5627ACFUS02	GAS?	35400	3725	236	696	$40	$271	6.8
5627	5627ACFUS03		42500	3725	236	836	$48	$326	6.8
5627	5627ACFUS04		42500	3725	236	836	$48	$326	6.8
5627	5627ACFUS05		42500	3725	236	836	$48	$326	6.8
5627	5627ACFUS06	GAS?	42500	3725	236	836	$48	$326	6.8
5627	5627ACFUS07		42500	3725	236	836	$48	$326	6.8
5627	5627ACFUS08		47000	3725	236	924	$53	$360	6.8
5627	5627ACFUS09	GAS?	47000	3725	236	924	$53	$360	6.8
571	571ACS01	HP	47000	3725	236	924	$53	$360	6.8
5974	5974ACHPS01-X	HP	56500	3725	236	1,111	$63	$433	6.8
5974	5974ACHPS02-X	HP	47000	3725	236	924	$53	$360	6.8
5974	5974ACHPS03-X	HP	47000	3725	236	924	$53	$360	6.8
5974	5974ACHPS04-X	HP	24800	3725	236	488	$28	$190	6.8
5974	5974ACHPS05-X	HP	24800	3725	236	488	$28	$190	6.8
5974	5974ACHPS06-X	HP	24800	3725	236	488	$28	$190	6.8
5974	5974ACHPS07-X	HP	24800	3725	236	488	$28	$190	6.8
5974	5974ACHPS08-X	HP	26800	3725	236	527	$30	$205	6.8
5975	5975ACHPS01-X	HP	24800	3725	236	488	$28	$190	6.8
5975	5975ACHPS02-X	HP	26800	3725	236	527	$30	$205	6.8
5975	5975ACHPS03-X	HP	26800	3725	236	527	$30	$205	6.8
5975	5975ACHPS04-X	HP	90000	3725	236	1,770	$101	$690	6.8
5975	5975ACHPS05-X	HP	90000	3725	236	1,770	$101	$690	6.8
5975	5975ACHPS07-X		90000	3725	236	1,770	$101	$690	6.8
5975	5975ACHPS08-X	HP	90000	3725	236	1,770	$101	$690	6.8
5975	5975ACHPS09-X	HP	60000	3725	236	1,180	$67	$460	6.8
5976	5976ACS01-1		90000	3725	236	1,770	$101	$690	6.8
5976	5976ACS02-2		90000	3725	236	1,770	$101	$690	6.8
5977	5977ACHPS01-X	HP	36000	3725	236	708	$40	$276	6.8
5977	5977ACHPS02-X	HP	60000	3725	236	1,180	$67	$460	6.8

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
5977	5977ACHPS03-X	HP	90000	3725	236	1,770	$101	$690	6.8
5977	5977ACHPS04-X	HP	9000	3725	236	177	$10	$69	6.8
5977	5977ACHPS05-X	HP	36000	3725	236	708	$40	$276	6.8
5977	5977ACHPS06-X	HP	36000	3725	236	708	$40	$276	6.8
5977	5977ACHPS07-X	HP	36000	3725	236	708	$40	$276	6.8
5977	5977ACHPS08-X	HP	1E+05	3725	236	2,360	$135	$920	6.8
5977	5977ACHPS09-X	HP	12000	3725	236	236	$13	$92	6.8
5978	5978ACHPS02-X	R	9000	3725	236	177	$10	$69	6.8
5978	5978ACHPS03-X	R	21400	3725	236	421	$24	$164	6.8
5978	5978ACHPS04-X	R	58000	3725	236	1,141	$65	$445	6.8
5978	5978ACHPS06-X	R	58000	3725	236	1,141	$65	$445	6.8
5978	5978ACHPS07-X	R	12000	3725	236	236	$13	$92	6.8
5978	5978ACHPS09-X	R	36000	3725	236	708	$40	$276	6.8
5978	5978ACS01-1		36000	3725	236	708	$40	$276	6.8
5979	5979ACHPS01-X	HP	36000	3725	236	708	$40	$276	6.8
5979	5979ACHPS02-X	HP	12000	3725	236	236	$13	$92	6.8
5979	5979ACHPS03-X	HP	36000	3725	236	708	$40	$276	6.8
5979	5979ACHPS04		36000	3725	236	708	$40	$276	6.8
5979	5979ACHPS05		36000	3725	236	708	$40	$276	6.8
5979	5979ACHPS06		36000	3725	236	708	$40	$276	6.8
5979	5979ACHPS07		36000	3725	236	708	$40	$276	6.8
5979	5979ACHPS08		36000	3725	236	708	$40	$276	6.8
5980	5980ACHPS01-X	HP	36000	3725	236	708	$40	$276	6.8
5980	5980ACHPS02-X	HP	36000	3725	236	708	$40	$276	6.8
5980	5980ACHPS03-X	HP	36000	3725	236	708	$40	$276	6.8
5980	5980ACHPS04-X	HP	36000	3725	236	708	$40	$276	6.8
5980	5980ACHPS05-X	HP	36000	3725	236	708	$40	$276	6.8
5980	5980ACHPS06-X	HP	36000	3725	236	708	$40	$276	6.8
5980	5980ACHPS07-X	HP	12000	3725	236	236	$13	$92	6.8
5980	5980ACHPS08-X	HP	36000	3725	236	708	$40	$276	6.8
5981	5981ACHPS01-X	R	24000	3725	236	472	$27	$184	6.8
5981	5981ACHPS02-X	R	24000	3725	236	472	$27	$184	6.8
5981	5981ACHPS03-X	R	42000	3725	236	826	$47	$322	6.8
5981	5981ACHPS04-X	R	48000	3725	236	944	$54	$368	6.8
5981	5981ACHPS05-X	R	24000	3725	236	472	$27	$184	6.8
5981	5981ACHPS06-X	R	24000	3725	236	472	$27	$184	6.8
5981	5981ACHPS07-X	R	24000	3725	236	472	$27	$184	6.8
5981	5981ACHPS08-X	R	24000	3725	236	472	$27	$184	6.8
5981	5981ACS01-X	R	24000	3725	236	472	$27	$184	6.8
5982	5982ACHPS03-X	R	36000	3725	236	708	$40	$276	6.8

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
5982	5982ACHPS05-X	R	24000	3725	236	472	$27	$184	6.8
5982	5982ACHPS06-X	R	24000	3725	236	472	$27	$184	6.8
5982	5982ACHPS08-X	R	24000	3725	236	472	$27	$184	6.8
5983	5983ACHPS01-X	R	24000	3725	236	472	$27	$184	6.8
5983	5983ACHPS02-X	R	24000	3725	236	472	$27	$184	6.8
5983	5983ACHPS03-X	R	24000	3725	236	472	$27	$184	6.8
5983	5983ACHPS04-X	R	24000	3725	236	472	$27	$184	6.8
5983	5983ACHPS05-X	R	24000	3725	236	472	$27	$184	6.8
5983	5983ACHPS06-X	R	36000	3725	236	708	$40	$276	6.8
5983	5983ACHPS07-X	R	58000	3725	236	1,141	$65	$445	6.8
5983	5983ACHPS08-X	R	60000	3725	236	1,180	$67	$460	6.8
5984	5984ACHPS01-X	R	58000	3725	236	1,141	$65	$445	6.8
5984	5984ACHPS02-X	R	58000	3725	236	1,141	$65	$445	6.8
5984	5984ACHPS03-X	R	57500	3725	236	1,131	$64	$441	6.8
5984	5984ACHPS04-X	R	57500	3725	236	1,131	$64	$441	6.8
5984	5984ACHPS05-X	R	58000	3725	236	1,141	$65	$445	6.8
5984	5984ACHPS06-X	R	58000	3725	236	1,141	$65	$445	6.8
5984	5984ACHPS07-X	R	58000	3725	236	1,141	$65	$445	6.8
5984	5984ACHPS08-X	R	58000	3725	236	1,141	$65	$445	6.8
5984	5984ACU01-1		24000	3725	236	472	$27	$184	6.8
5985	5985ACHPS01	R	60000	3725	236	1,180	$67	$460	6.8
5985	5985ACHPS05	R	60000	3725	236	1,180	$67	$460	6.8
5985	5985ACHPS06	R	42000	3725	236	826	$47	$322	6.8
5985	5985ACHPS07	R	42000	3725	236	826	$47	$322	6.8
5985	5985ACHPS08	R	23000	3725	236	452	$26	$176	6.8
6127	6127ACHPS01	HP	23000	3725	236	452	$26	$176	6.8
6127	6127ACHPS02	HP	23000	3725	236	452	$26	$176	6.8
6178	6178ACUW01-X		36000	3725	236	708	$40	$276	6.8
6179	6179ACHPS01	HP	42000	3725	236	826	$47	$322	6.8
6179	6179ACHPS02	HP	36000	3725	236	708	$40	$276	6.8
6179	6179ACHPS03	HP	42000	3725	236	826	$47	$322	6.8
6179	6179ACS01	R	36000	3725	236	708	$40	$276	6.8
6203	6203ACS02-X	HP	36000	3725	236	708	$40	$276	6.8
6205	3595ACHPS01-X		42000	3725	236	826	$47	$322	6.8
6525	6525ACHPS01	R	57500	3725	236	1,131	$64	$441	6.8
6525	6525ACHPS02	R	35600	3725	236	700	$40	$273	6.8
6925	6925ACHPS01	HP	35600	3725	236	700	$40	$273	6.8
6925	6925ACHPS02	HP	35600	3725	236	700	$40	$273	6.8
6925	6925ACHPS03	HP	35600	3725	236	700	$40	$273	6.8
6925	6925ACHPS04	HP	36000	3725	236	708	$40	$276	6.8

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
6925	6925ACHPS05	HP	36000	3725	236	708	$40	$276	6.8
6925	6925ACHPS06	HP	36000	3725	236	708	$40	$276	6.8
6925	6925ACHPS07	HP	40000	3725	236	787	$45	$307	6.8
6925	6925ACHPS08	HP	40000	3725	236	787	$45	$307	6.8
6925	6925ACHPS09-X	HP	40000	3725	236	787	$45	$307	6.8
6925	6925ACHPS10-X	HP	40000	3725	236	787	$45	$307	6.8
6925	6925ACHPS11-X	HP	40000	3725	236	787	$45	$307	6.8

Appendix J. Whole Facility Savings for IDEC System Measure

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
194A	194AACHPS01-X	HP	30200	1602	1338	3,367	$192	$1,070	5.6
198	198ACUW01		14000	1602	1338	1,561	$89	$496	5.6
198	198ACUW02		13500	1602	1338	1,505	$86	$478	5.6
198	198ACUW03-X		12000	1602	1338	1,338	$76	$425	5.6
198	198ACUW04		9700	1602	1338	1,082	$62	$344	5.6
328	328ACUW01-X		0	1602	1338	0	$0	$0	N/A
367	367ACUW03		12000	3725	347	347	$20	$425	21.5
376	376ACS01-X	R	36000	1602	1327	3,981	$227	$1,275	5.6
376	376ACS02-X	R	47000	1602	1327	5,197	$296	$1,665	5.6
379	379ACS01-X		12000	1602	1338	1,338	$76	$425	5.6
379	379ACHPS01	HP	48500	1602	1338	5,408	$308	$1,718	5.6
379	379ACHPS02	HP	35400	1602	1338	3,947	$225	$1,254	5.6
382	382ACU01-X		0	1602	1338	0	$0	$0	N/A
531	531ACU01-1		240000	1602	1338	26,760	$1,525	$8,500	5.6
531	531ACU02-2		240000	1602	1338	26,760	$1,525	$8,500	5.6
533	533ACUW01		0	1886	437	0	$0	$0	N/A
571	571ACS01	HP	57500	3725	347	1,663	$95	$2,036	21.5
1280	1280ACHPS01-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1280	1280ACHPS02-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1280	1280ACHPS03-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1280	1280ACHPS04-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1280	1280ACHPS05-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1280	1280ACHPS06-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1280	1280ACHPS07-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1280	1280ACHPS08-X	R	31200	1735	736	1,914	$109	$1,105	10.1
1401	1401ACU01-1		12000	1735	651	651	$37	$425	11.5
1401	1401ACS01-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS02-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS03-X	HP	23000	1735	651	1,248	$71	$815	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1401	1401ACS04-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS05-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS06-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS07-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS08-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS09-X	HP	23000	1735	651	1,248	$71	$815	11.5
1401	1401ACS10-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS01-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS02-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS03-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS04-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS05-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS06-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS07-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS08-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS09-X	HP	23000	1735	651	1,248	$71	$815	11.5
1403	1403ACS10-X	HP	23000	1735	651	1,248	$71	$815	11.5
1405	1405ACS11		60000	1735	651	3,255	$186	$2,125	11.5
1481	1481ACS01		24000	1735	651	1,302	$74	$850	11.5
1481	1481ACHPS01-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS02-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS03-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS04-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS05-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS06-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS07-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS08-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1481	1481ACHPS09-X	R	35200	1735	736	2,159	$123	$1,247	10.1
1492	1492ACS01-X	R	30000	1735	736	1,840	$105	$1,063	10.1
1492	1492ACS02-X	R	30000	1735	736	1,840	$105	$1,063	10.1
1526	1526ACS01-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1526	1526ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1578	1578ACHPS01-X	HP	35400	1735	651	1,920	$109	$1,254	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1578	1578ACHPS02-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
1578	1578ACHPS03-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
1578	1578ACHPS04-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
1578	1578ACHPS05-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
1578	1578ACHPS06-X	HP	22600	1735	651	1,226	$70	$800	11.5
1578	1578ACHPS07-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
1578	1578ACHPS08-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
1578	1578ACHPS09-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
1601	1601ACS01-X	R	36000	3725	498	1,494	$85	$1,275	15.0
1601	1601ACS02-X	R	36000	3725	498	1,494	$85	$1,275	15.0
1602	1602ACHPS01-X	R	36000	1886	575	1,725	$98	$1,275	13.0
1602	1602ACHPS02-X	R	36000	1886	575	1,725	$98	$1,275	13.0
1602	1602ACHPS03-X	R	36000	1886	575	1,725	$98	$1,275	13.0
1677	1677ACHPS01-X		90000	3725	347	2,603	$148	$3,188	21.5
1677	1677ACHPS03-X		90000	3725	347	2,603	$148	$3,188	21.5
1677	1677ACHPS04-X		90000	3725	347	2,603	$148	$3,188	21.5
1677	1677ACHPS05-X		90000	3725	347	2,603	$148	$3,188	21.5
1677	1677ACHPS06-X		60000	3725	347	1,735	$99	$2,125	21.5
1677	1677ACHPS07-X		90000	3725	347	2,603	$148	$3,188	21.5
1677	1677ACHPS08-X		90000	3725	347	2,603	$148	$3,188	21.5
1677	1677ACHPS09-X		36000	3725	347	1,041	$59	$1,275	21.5
1677	1677ACHPS10-X		60000	3725	347	1,735	$99	$2,125	21.5
1677	1677ACHPS11-X		90000	3725	347	2,603	$148	$3,188	21.5
1677	1677ACU05-3		36000	3725	347	1,041	$59	$1,275	21.5
1677	1677ACU06-3		36000	3725	347	1,041	$59	$1,275	21.5
1677	1677ACU07-3		36000	3725	347	1,041	$59	$1,275	21.5
1677	1677RCUA03-3		120000	3725	347	3,470	$198	$4,250	21.5
1677	1677ACU01-1	NONE	9000	3725	347	260	$15	$319	21.5
1678	1678ACHPS01-X		36000	1735	651	1,953	$111	$1,275	11.5
1678	1678ACHPS02-X		36000	1735	651	1,953	$111	$1,275	11.5
1678	1678ACHPS03-X		36000	1735	651	1,953	$111	$1,275	11.5
1678	1678ACHPS04-X		36000	1735	651	1,953	$111	$1,275	11.5
1678	1678ACHPS05-X		36000	1735	651	1,953	$111	$1,275	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1680	1680ACS01		12000	3725	347	347	$20	$425	21.5
1680	1680ACHPS01-X	R	35200	3725	498	1,461	$83	$1,247	15.0
1680	1680ACHPS02-X	R	35200	3725	498	1,461	$83	$1,247	15.0
1680	1680ACHPS03-X	R	35200	3725	498	1,461	$83	$1,247	15.0
1680	1680ACHPS04-X	R	35200	3725	498	1,461	$83	$1,247	15.0
1680	1680ACHPS05-X	R	35200	3725	498	1,461	$83	$1,247	15.0
1680	1680ACHPS06-X	R	35200	3725	498	1,461	$83	$1,247	15.0
1713	1713ACS01-X	R	24000	2701	2094	4,188	$239	$850	3.6
1727	1727ACHPS06-X		36000	1735	651	1,953	$111	$1,275	11.5
1727	1727ACS01-X	R	23000	1735	736	1,411	$80	$815	10.1
1730	1730ACS01-X	R	35000	1735	736	2,147	$122	$1,240	10.1
1730	1730ACS02-X	R	35000	1735	736	2,147	$122	$1,240	10.1
1730	1730ACS03-X	R	35000	1735	736	2,147	$122	$1,240	10.1
1735	1735ACHPS01-X	HP	43000	1735	651	2,333	$133	$1,523	11.5
1735	1735ACHPS02-X	HP	43000	1735	651	2,333	$133	$1,523	11.5
1735	1735ACHPS03-X	HP	48500	1735	651	2,631	$150	$1,718	11.5
1739	1739ACHPS01-X	HP	35000	3725	347	1,012	$58	$1,240	21.5
1739	1739ACHPS02-X	HP	35000	3725	347	1,012	$58	$1,240	21.5
1739	1739ACHPS03-X	HP	35000	3725	347	1,012	$58	$1,240	21.5
1739	1739ACHPS04-X	HP	35000	3725	347	1,012	$58	$1,240	21.5
1739	1739ACHPS05-X	HP	35000	3725	347	1,012	$58	$1,240	21.5
1739	1739ACHPS06-X	HP	35000	3725	347	1,012	$58	$1,240	21.5
1739	1739ACHPS07-X	HP	35000	3725	347	1,012	$58	$1,240	21.5
1739	1739ACU01-1	NONE	9000	3725	347	260	$15	$319	21.5
1826	1826ACU01-1X		12000	1735	651	651	$37	$425	11.5
1826	1826ACHPS01-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
1826	1826ACHPS02-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
1826	1826ACHPS05-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
1826	1826ACHPS06-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
1826	1826ACHPS07-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
1826	1826ACHPS09-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
1830	1830ACS01-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1830	1830ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1830	1830ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1830	1830ACS04-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1830	1830ACS05-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1830	1830ACS06-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1830	1830ACS07-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1830	1830ACS08-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1830	1830ACS09-X	R	36000	1735	736	2,208	$126	$1,275	10.1
1879	1879ACUW01		6000	2627	1031	516	$29	$213	7.2
1879	1879ACUW02		6000	2627	1031	516	$29	$213	7.2
1879	1879ACHPS01-X	HP	35400	2627	1031	3,041	$173	$1,254	7.2
1884	1884ACHPS01-X	HP	35000	1735	651	1,899	$108	$1,240	11.5
1884	1884ACHPS02-X	HP	35000	1735	651	1,899	$108	$1,240	11.5
1884	1884ACHPS03-X	HP	35000	1735	651	1,899	$108	$1,240	11.5
1884	1884ACHPS04-X	HP	35000	1735	651	1,899	$108	$1,240	11.5
1885	1885ACHPS01-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
1885	1885ACHPS02-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
1885	1885ACHPS03-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
1885	1885ACHPS04-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
1885	1885ACHPS05-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
1885	1885ACHPS06-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
1886	1886ACHPS01-X	HP	33600	1602	1338	3,746	$214	$1,190	5.6
1886	1886ACHPS02-X	HP	33600	1602	1338	3,746	$214	$1,190	5.6
1886	1886ACHPS03-X	HP	35000	1602	1338	3,903	$222	$1,240	5.6
1886	1886ACHPS04-X	HP	33600	1602	1338	3,746	$214	$1,190	5.6
1887	1887ACHPS01-X		18000	1735	651	977	$56	$638	11.5
1887	1887ACHPS02-X		18000	1735	651	977	$56	$638	11.5
1887	1887ACHPS03-X		18000	1735	651	977	$56	$638	11.5
1887	1887ACHPS04-X		18000	1735	651	977	$56	$638	11.5
1887	1887ACHPS05-X		18000	1735	651	977	$56	$638	11.5
1887	1887ACHPS06-X		18000	1735	651	977	$56	$638	11.5
1887	1887ACHPS07-X	HP	34800	1735	651	1,888	$108	$1,233	11.5
1888	1888ACHPS01-X	HP	18000	1735	651	977	$56	$638	11.5
1888	1888ACHPS02-X	HP	42000	1735	651	2,279	$130	$1,488	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1888	1888ACHPS03-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS04-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS05-X	HP	18000	1735	651	977	$56	$638	11.5
1888	1888ACHPS06-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS07-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS08-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS09-X	HP	42000	1735	651	2,279	$130	$1,488	11.5
1888	1888ACHPS10-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS11-X	HP	56000	1735	651	3,038	$173	$1,983	11.5
1888	1888ACHPS12-X	HP	42000	1735	651	2,279	$130	$1,488	11.5
1888	1888ACHPS13-X	HP	30200	1735	651	1,638	$93	$1,070	11.5
1888	1888ACHPS14-X	HP	56000	1735	651	3,038	$173	$1,983	11.5
1888	1888ACHPS15-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS16-X	HP	56000	1735	651	3,038	$173	$1,983	11.5
1888	1888ACHPS17-X	HP	36200	1735	651	1,964	$112	$1,282	11.5
1888	1888ACHPS18-X	HP	42000	1735	651	2,279	$130	$1,488	11.5
1888	1888ACHPS19-X	HP	42000	1735	651	2,279	$130	$1,488	11.5
1889	1889ACHPS01-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS02-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS03-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS04-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS05-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS06-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS07-X	HP	58500	1735	651	3,174	$181	$2,072	11.5
1889	1889ACHPS08-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS09-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS10-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS11-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS12-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS13-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS14-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS15-X	HP	48000	1735	651	2,604	$148	$1,700	11.5
1889	1889ACHPS16-X	HP	48000	1735	651	2,604	$148	$1,700	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
1889	1889ACHPS17-X	HP	41000	1735	651	2,224	$127	$1,452	11.5
1889	1889ACHPS18-X	HP	41000	1735	651	2,224	$127	$1,452	11.5
1889	1889ACHPS19-X	HP	41000	1735	651	2,224	$127	$1,452	11.5
1889	1889ACHPS20-X	HP	41000	1735	651	2,224	$127	$1,452	11.5
1889	1889ACHPS21-X	HP	41000	1735	651	2,224	$127	$1,452	11.5
1925	1925ACS01		36000	1735	651	1,953	$111	$1,275	11.5
1925	1925ACS02		36000	1735	651	1,953	$111	$1,275	11.5
1925	1925ACS03		36000	1735	651	1,953	$111	$1,275	11.5
2128	2128ACS02-X	R	35000	3725	498	1,453	$83	$1,240	15.0
2177	2177ACU01-1H		12000	1735	651	651	$37	$425	11.5
2177	2177ACUW01-HX		6000	1735	651	326	$19	$213	11.5
2177	2177ACHPS01-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
2177	2177ACHPS03-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
2180	2180ACS01-X		24000	1735	651	1,302	$74	$850	11.5
2180	2180ACS02-X		24000	1735	651	1,302	$74	$850	11.5
2180	2180ACS03-X		24000	1735	651	1,302	$74	$850	11.5
2180	2180ACS04-X	R	24000	1735	736	1,472	$84	$850	10.1
2525	2525ACS01-X	R	35000	1735	736	2,147	$122	$1,240	10.1
2525	2525ACS02-X	R	35000	1735	736	2,147	$122	$1,240	10.1
2525	2525ACS03-X	R	35000	1735	736	2,147	$122	$1,240	10.1
2580	2580ACHPS01		36000	5976	3196	9,588	$547	$1,275	2.3
2580	2580ACHPS02		36000	5976	3196	9,588	$547	$1,275	2.3
2580	2580ACHPS03		48000	5976	3196	12,784	$729	$1,700	2.3
2625	2625ACUW01		0	2701	1947	0	$0	$0	N/A
2625	2625ACUW02		0	2701	1947	0	$0	$0	N/A
2627	2627ACS01-X	R	24000	2627	1077	2,154	$123	$850	6.9
2627	2627ACS02-X	R	24000	2627	1077	2,154	$123	$850	6.9
2627	2627ACS03-X	R	24000	2627	1077	2,154	$123	$850	6.9
2627	2627ACS04-X	R	24000	2627	1077	2,154	$123	$850	6.9
2632	2632ACS01		36000	1602	1338	4,014	$229	$1,275	5.6
2632	2632ACS02		36000	1602	1338	4,014	$229	$1,275	5.6
2679	2679ACS18		24000	1735	651	1,302	$74	$850	11.5
2679	2679ACHPS03-X	HP	35200	1735	651	1,910	$109	$1,247	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
2679	2679ACHPS07-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
2679	2679ACHPS09	HP	35200	1735	651	1,910	$109	$1,247	11.5
2679	2679ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2679	2679ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2679	2679ACS04-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2679	2679ACS06-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2679	2679ACS08-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2679	2679ACS12-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2679	2679ACS15-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2679	2679ACS16-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2684	2684ACS09-X		24000	1735	651	1,302	$74	$850	11.5
2684	2684ACS03-X	R	30000	1735	736	1,840	$105	$1,063	10.1
2684	2684ACS06-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2684	2684ACS07-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2685	2685ACHPS02-X		24000	1735	651	1,302	$74	$850	11.5
2685	2685ACHPS04-X		24000	1735	651	1,302	$74	$850	11.5
2685	2685ACHPS05-X		24000	1735	651	1,302	$74	$850	11.5
2685	2685ACHPS06-X		24000	1735	651	1,302	$74	$850	11.5
2685	2685ACHPS01-X	R	22600	1735	736	1,386	$79	$800	10.1
2687	2687ACHPS01-X		36000	1735	651	1,953	$111	$1,275	11.5
2687	2687ACHPS03-X		36000	1735	651	1,953	$111	$1,275	11.5
2701	2701ACS01-X	R	36000	2701	2094	6,282	$358	$1,275	3.6
2726	2726ACUW01		21400	3725	347	619	$35	$758	21.5
2726	2726ACHPS02-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2727	2727ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2727	2727ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2728	2728ACHPS01-X	HP	35400	1602	1338	3,947	$225	$1,254	5.6
2728	2728ACHPS02-X	HP	35400	1602	1338	3,947	$225	$1,254	5.6
2728	2728ACHPS03-X	HP	35400	1602	1338	3,947	$225	$1,254	5.6
2775	2775ACHPS01		36000	1735	651	1,953	$111	$1,275	11.5
2775	2775ACS01-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2775	2775ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2775	2775ACS04-X	R	36000	1735	736	2,208	$126	$1,275	10.1

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
2775	2775ACS09-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2775	2775ACS12-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2775	2775ACS13-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2775	2775ACS14-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2775	2775ACS15-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2787	2787ACS01		36000	2701	1947	5,841	$333	$1,275	3.8
2801	2801ACS01-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2801	2801ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2801	2801ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2802	2802ACS01-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2802	2802ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2802	2802ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
2808	2808ACS01		6000	2701	1947	974	$55	$213	3.8
2825	2825ACHPS02-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2825	2825ACHPS03-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2825	2825ACHPS04-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2825	2825ACHPS05-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2825	2825ACHPS06-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2825	2825ACHPS07-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2825	2825ACHPS08-X	HP	35400	3725	347	1,024	$58	$1,254	21.5
2925	2925ACUW01		12000	3725	347	347	$20	$425	21.5
2925	2925ACHPS02	HP	58000	3725	347	1,677	$96	$2,054	21.5
2925	2925ACHPS03	HP	58000	3725	347	1,677	$96	$2,054	21.5
3180	3180ACU01		12000	1735	651	651	$37	$425	11.5
3180	3180ACUW01		12000	1735	651	651	$37	$425	11.5
3180	3180ACUW02		12000	1735	651	651	$37	$425	11.5
3180	3180ACUW03		12000	1735	651	651	$37	$425	11.5
3180	3180ACUW04		12000	1735	651	651	$37	$425	11.5
3180	3180RCUA01		60000	1735	651	3,255	$186	$2,125	11.5
3180	3180ACHPS03-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
3180	3180ACHPS06-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
3203	3203ACHPS01	HP	36000	1602	1338	4,014	$229	$1,275	5.6
3203	3203ACHPS02	HP	36000	1602	1338	4,014	$229	$1,275	5.6

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
3204	3204ACS01	R	36000	1602	1327	3,981	$227	$1,275	5.6
3204	3204ACS02	R	36000	1602	1327	3,981	$227	$1,275	5.6
3226	3226ACHPS01		36000	3725	347	1,041	$59	$1,275	21.5
3226	3226ACHPS02		36000	3725	347	1,041	$59	$1,275	21.5
3226	3226ACHPS04		36000	3725	347	1,041	$59	$1,275	21.5
3427	3427ACS01		12000	3725	347	347	$20	$425	21.5
3427	3427ACHPS01-X	HP	42500	3725	347	1,229	$70	$1,505	21.5
3427	3427ACHPS02-X	HP	42500	3725	347	1,229	$70	$1,505	21.5
3427	3427ACHPS03-X	HP	42500	3725	347	1,229	$70	$1,505	21.5
3427	3427ACHPS04-X	HP	42500	3725	347	1,229	$70	$1,505	21.5
3427	3427ACHPS05-X	HP	42500	3725	347	1,229	$70	$1,505	21.5
3520	3520ACS01	R	23000	1735	736	1,411	$80	$815	10.1
3520	3520ACS02	R	30000	1735	736	1,840	$105	$1,063	10.1
3520	3520ACS03	R	23000	1735	736	1,411	$80	$815	10.1
3520	3520ACS04	R	36000	1735	736	2,208	$126	$1,275	10.1
3520	3520ACS05	R	36000	1735	736	2,208	$126	$1,275	10.1
3520	3520ACS07	R	36000	1735	736	2,208	$126	$1,275	10.1
3520	3520ACS11	R	36000	1735	736	2,208	$126	$1,275	10.1
3520	3520ACS12	R	36000	1735	736	2,208	$126	$1,275	10.1
3520	3520ACS13	R	30000	1735	736	1,840	$105	$1,063	10.1
3520	3520ACS14	R	24000	1735	736	1,472	$84	$850	10.1
3526	3526ACHPS01-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
3526	3526ACHPS02-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
3526	3526ACHPS03-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
3527	3527ACHPS01-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS02-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS03-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS04-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS05-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS06-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS07-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS08-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS09-X		36000	3725	347	1,041	$59	$1,275	21.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
3527	3527ACHPS10-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS11-X		36000	3725	347	1,041	$59	$1,275	21.5
3527	3527ACHPS12-X		36000	3725	347	1,041	$59	$1,275	21.5
3577	3577ACHPS01-X		36000	1735	651	1,953	$111	$1,275	11.5
3577	3577ACHPS02-X		36000	1735	651	1,953	$111	$1,275	11.5
3577	3577ACHPS04-X		36000	1735	651	1,953	$111	$1,275	11.5
3577	3577ACUW01		8000	1735	651	434	$25	$283	11.5
3577	3577ACHPS05-X	HP	38000	1735	651	2,062	$118	$1,346	11.5
3703	3703ACS13		36000	1735	651	1,953	$111	$1,275	11.5
3703	3703ACHPS01-X	R	30000	1735	736	1,840	$105	$1,063	10.1
3703	3703ACHPS02-X	R	30000	1735	736	1,840	$105	$1,063	10.1
3703	3703ACHPS03-X	R	23000	1735	736	1,411	$80	$815	10.1
3703	3703ACHPS04-X	R	23000	1735	736	1,411	$80	$815	10.1
3703	3703ACHPS05-X	R	23000	1735	736	1,411	$80	$815	10.1
3703	3703ACHPS07-X	R	30000	1735	736	1,840	$105	$1,063	10.1
3703	3703ACHPS10-X	R	30000	1735	736	1,840	$105	$1,063	10.1
3703	3703ACS11	R	23000	1735	736	1,411	$80	$815	10.1
3703	3703ACS12	R	36000	1735	736	2,208	$126	$1,275	10.1
3703	3703ACS14	R	36000	1735	736	2,208	$126	$1,275	10.1
3726	3726ACS49-X		36000	3725	347	1,041	$59	$1,275	21.5
3751	3751ACHPS03-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
3751	3751ACHPS01-X	R	35000	1735	736	2,147	$122	$1,240	10.1
3775	3775ACHPS01-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
3775	3775ACHPS02-X	HP	35200	1735	651	1,910	$109	$1,247	11.5
3777	3777ACHPS01		36000	1735	651	1,953	$111	$1,275	11.5
3777	3777ACHPS09		36000	1735	651	1,953	$111	$1,275	11.5
3777	3777ACHPS02	R	31200	1735	736	1,914	$109	$1,105	10.1
3777	3777ACHPS03	R	31200	1735	736	1,914	$109	$1,105	10.1
3777	3777ACHPS04	R	31200	1735	736	1,914	$109	$1,105	10.1
3777	3777ACHPS05	R	31200	1735	736	1,914	$109	$1,105	10.1
3777	3777ACHPS06	R	31200	1735	736	1,914	$109	$1,105	10.1
3777	3777ACHPS07	R	31200	1735	736	1,914	$109	$1,105	10.1
3777	3777ACHPS08-X	R	31200	1735	736	1,914	$109	$1,105	10.1

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
3925	3925ACS01	R	30000	2627	1077	2,693	$153	$1,063	6.9
3925	3925ACS02	R	30000	2627	1077	2,693	$153	$1,063	6.9
3925	3925ACS03	R	30000	2627	1077	2,693	$153	$1,063	6.9
4107	4107ACS01-X	R	18600	1886	575	891	$51	$659	13.0
4161	4161ACS01-X	R	47000	1735	736	2,883	$164	$1,665	10.1
4161	4161ACS02-X	R	47000	1735	736	2,883	$164	$1,665	10.1
4180	4180ACUW01		6000	1735	651	326	$19	$213	11.5
4180	4180ACUW02-X		18200	1735	651	987	$56	$645	11.5
4180	4180ACHPS01-X	HP	28500	1735	651	1,546	$88	$1,009	11.5
4180	4180ACHPS02-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4180	4180ACHPS03-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4184	4184ACHPS02-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4184	4184ACHPS03-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4184	4184ACHPS05-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4302	4302ACUW26		6000	1735	651	326	$19	$213	11.5
4302	4302ACHPS04-X	R	36000	1735	736	2,208	$126	$1,275	10.1
4302	4302ACS03-X	R	30000	1735	736	1,840	$105	$1,063	10.1
4302	4302ACS04-X	R	16500	1735	736	1,012	$58	$584	10.1
4302	4302ACS05-X	R	17500	1735	736	1,073	$61	$620	10.1
4316	4316ACUW01		6000	1886	437	219	$12	$213	17.1
4316	4316ACUW02		6000	1886	437	219	$12	$213	17.1
4325	4325ACHPS01-X		36000	1735	651	1,953	$111	$1,275	11.5
4325	4325ACHPS02-X		36000	1735	651	1,953	$111	$1,275	11.5
4325	4325ACHPS03-X		36000	1735	651	1,953	$111	$1,275	11.5
4377	4377ACS01-X	R	36000	1735	736	2,208	$126	$1,275	10.1
4377	4377ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
4377	4377ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
4377	4377ACS04-X	R	36000	1735	736	2,208	$126	$1,275	10.1
4377	4377ACS06-X	R	36000	1735	736	2,208	$126	$1,275	10.1
4383	4383ACU02-1	NONE	18000	1735	651	977	$56	$638	11.5
4383	4383ACU03-1	NONE	18000	1735	651	977	$56	$638	11.5
4384	4384ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
4385	4385ACHPS01-X	HP	36000	1735	651	1,953	$111	$1,275	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
4385	4385ACHPS02-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4385	4385ACHPS03-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4385	4385ACHPS04-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4385	4385ACHPS05-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4385	4385ACHPS06-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
4406	4406ACS01	R	36000	1735	736	2,208	$126	$1,275	10.1
4406	4406ACS02	R	36000	1735	736	2,208	$126	$1,275	10.1
4406	4406ACS03	R	36000	1735	736	2,208	$126	$1,275	10.1
4406	4406ACS04	R	29000	1735	736	1,779	$101	$1,027	10.1
4407	4407ACUW01		0	1886	437	0	$0	$0	N/A
4407	4407ACUW02		6000	1886	437	219	$12	$213	17.1
4442	4442ACHPS06-X	HP	35600	1735	651	1,931	$110	$1,261	11.5
4442	4442ACHPS01-X	R	35200	1735	736	2,159	$123	$1,247	10.1
4442	4442ACHPS02-X	R	35200	1735	736	2,159	$123	$1,247	10.1
4442	4442ACHPS03-X	R	35200	1735	736	2,159	$123	$1,247	10.1
4442	4442ACHPS04-X	R	35200	1735	736	2,159	$123	$1,247	10.1
4442	4442ACHPS05-X	R	35200	1735	736	2,159	$123	$1,247	10.1
4442	4442ACHPS07-X	R	35200	1735	736	2,159	$123	$1,247	10.1
4442	4442ACHPS08-X	R	35200	1735	736	2,159	$123	$1,247	10.1
4475	4475ACHPS01	HP	60000	1602	1338	6,690	$381	$2,125	5.6
4475	4475ACHPS02	HP	60000	1602	1338	6,690	$381	$2,125	5.6
4509	4509ACU01-1H		24000	1886	437	874	$50	$850	17.1
4525	4525ACHPS01	HP	35400	3725	347	1,024	$58	$1,254	21.5
4525	4525ACHPS02	HP	40000	3725	347	1,157	$66	$1,417	21.5
4525	4525ACHPS03	HP	35400	3725	347	1,024	$58	$1,254	21.5
4525	4525ACHPS04	HP	40000	3725	347	1,157	$66	$1,417	21.5
4525	4525ACHPS05	HP	40000	3725	347	1,157	$66	$1,417	21.5
4576	4576ACHPS01-X	HP	35000	5976	3196	9,322	$531	$1,240	2.3
4675	4675ACHPS02-X	HP	36000	4128	621	1,863	$106	$1,275	12.0
4675	4675ACHPS03-X	HP	36000	4128	621	1,863	$106	$1,275	12.0
4675	4675ACHPS07-X	HP	36000	4128	621	1,863	$106	$1,275	12.0
4675	4675ACHPS09	HP	35400	4128	621	1,832	$104	$1,254	12.0
4675	4675ACHPS10	HP	35400	4128	621	1,832	$104	$1,254	12.0

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
4675	4675ACHPS11	HP	35400	4128	621	1,832	$104	$1,254	12.0
4675	4675ACHPS12	HP	35400	4128	621	1,832	$104	$1,254	12.0
4675	4675ACHPS13	HP	35400	4128	621	1,832	$104	$1,254	12.0
4675	4675ACHPS14	HP	35400	4128	621	1,832	$104	$1,254	12.0
4675	4675ACHPS17-X	HP	93000	4128	621	4,813	$274	$3,294	12.0
4675	4675ACHPS18-X	HP	48000	4128	621	2,484	$142	$1,700	12.0
4675	4675ACHPS19-X	HP	48000	4128	621	2,484	$142	$1,700	12.0
4725	4725ACHPS01		24000	5976	3196	6,392	$364	$850	2.3
4725	4725ACHPS02		24000	5976	3196	6,392	$364	$850	2.3
4725	4725ACHPS03		42000	5976	3196	11,186	$638	$1,488	2.3
4725	4725ACHPS04		36000	5976	3196	9,588	$547	$1,275	2.3
4725	4725ACHPS05		36000	5976	3196	9,588	$547	$1,275	2.3
4725	4725ACS01		120000	5976	3196	31,960	$1,822	$4,250	2.3
4725	4725ACS02		120000	5976	3196	31,960	$1,822	$4,250	2.3
4725	4725ACS03		120000	5976	3196	31,960	$1,822	$4,250	2.3
4725	4725ACS04		120000	5976	3196	31,960	$1,822	$4,250	2.3
4725	4725ACS05		120000	5976	3196	31,960	$1,822	$4,250	2.3
4725	4725ACS06		36000	5976	3196	9,588	$547	$1,275	2.3
4726	4726ACHPS01		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS02		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS03		42000	3725	347	1,215	$69	$1,488	21.5
4726	4726ACHPS04		48000	3725	347	1,388	$79	$1,700	21.5
4726	4726ACHPS05		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS06		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS07		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS08		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS09		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS10		36000	3725	347	1,041	$59	$1,275	21.5
4726	4726ACHPS11		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS12		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS13		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS14		24000	3725	347	694	$40	$850	21.5
4726	4726ACHPS15		24000	3725	347	694	$40	$850	21.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
4726	4726ACHPS16		24000	3725	347	694	$40	$850	21.5
4726	4726ACS01		24000	3725	347	694	$40	$850	21.5
4726	4726ACS02		24000	3725	347	694	$40	$850	21.5
4727	4727ACHPS01		36000	4727	0	0	$0	$0	N/A
4727	4727ACHPS02		36000	4727	0	0	$0	$0	N/A
4727	4727ACHPS03		18000	4727	0	0	$0	$0	N/A
4727	4727ACHPS04		18000	4727	0	0	$0	$0	N/A
4727	4727ACHPS05		18000	4727	0	0	$0	$0	N/A
4727	4727ACHPS06		24000	4727	0	0	$0	$0	N/A
4727	4727ACHPS07		42000	4727	0	0	$0	$0	N/A
4727	4727ACHPS08		48000	4727	0	0	$0	$0	N/A
4727	4727ACHPS09		48000	4727	0	0	$0	$0	N/A
4727	4727ACHPS10		36000	4727	0	0	$0	$0	N/A
4728	4728ACHPS01		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS02		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS03		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS04		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS05		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS06		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS07		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS08		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS09		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS10		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS11		24000	4727	0	0	$0	$0	N/A
4728	4728ACHPS12		24000	4727	0	0	$0	$0	N/A
4729	4729ACHPS01		48000	4727	0	0	$0	$0	N/A
4729	4729ACHPS02		42000	4727	0	0	$0	$0	N/A
4729	4729ACHPS03		36000	4727	0	0	$0	$0	N/A
4729	4729ACHPS04		24000	4727	0	0	$0	$0	N/A
4729	4729ACHPS05		24000	4727	0	0	$0	$0	N/A
4729	4729ACHPS06		24000	4727	0	0	$0	$0	N/A
4729	4729ACHPS07		36000	4727	0	0	$0	$0	N/A
4729	4729ACHPS08		24000	4727	0	0	$0	$0	N/A

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
5105	5105ACUW02-X		72000	1735	651	3,906	$223	$2,550	11.5
5125	5125ACS01-X	HP	30000	1735	651	1,628	$93	$1,063	11.5
5125	5125ACS02-X	HP	23000	1735	651	1,248	$71	$815	11.5
5125	5125ACS03-X	HP	30000	1735	651	1,628	$93	$1,063	11.5
5125	5125ACS05-X	HP	30000	1735	651	1,628	$93	$1,063	11.5
5207	5207ACS01		18000	1886	437	656	$37	$638	17.1
5225	5225ACS01-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
5226	5226ACS04-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
5475	5475ACHPS03		36000	3725	347	1,041	$59	$1,275	21.5
5475	5475ACHPS25-X		24000	3725	347	694	$40	$850	21.5
5475	5475ACU01		0	3725	347	0	$0	$0	N/A
5475	5475ACHPS01-X	HP	47000	3725	347	1,359	$77	$1,665	21.5
5475	5475ACHPS02-X	HP	40000	3725	347	1,157	$66	$1,417	21.5
5475	5475ACHPS06-X	HP	47000	3725	347	1,359	$77	$1,665	21.5
5475	5475ACHPS07-X	HP	58000	3725	347	1,677	$96	$2,054	21.5
5475	5475ACHPS08-X	HP	60000	3725	347	1,735	$99	$2,125	21.5
5475	5475ACHPS09-X	HP	58000	3725	347	1,677	$96	$2,054	21.5
5475	5475ACHPS12-X	HP	58000	3725	347	1,677	$96	$2,054	21.5
5475	5475ACHPS13-X	HP	57500	3725	347	1,663	$95	$2,036	21.5
5475	5475ACHPS13-X	HP	57500	3725	347	1,663	$95	$2,036	21.5
5475	5475ACHPS14-X	HP	40000	3725	347	1,157	$66	$1,417	21.5
5475	5475ACHPS15-X	HP	58000	3725	347	1,677	$96	$2,054	21.5
5475	5475ACHPS16-X	HP	58000	3725	347	1,677	$96	$2,054	21.5
5475	5475ACHPS17-X	HP	58000	3725	347	1,677	$96	$2,054	21.5
5475	5475ACHPS19-X	HP	47000	3725	347	1,359	$77	$1,665	21.5
5475	5475ACHPS20-X	HP	58000	3725	347	1,677	$96	$2,054	21.5
5475	5475ACHPS26-X	HP	60000	3725	347	1,735	$99	$2,125	21.5
5475	5475ACHPS27-X	HP	60000	3725	347	1,735	$99	$2,125	21.5
5475	5475ACS01	R	24600	3725	498	1,021	$58	$871	15.0
5475	5475ACS02	R	24600	3725	498	1,021	$58	$871	15.0
5475	5475ACS03	R	92000	3725	498	3,818	$218	$3,258	15.0
5626	5626ACFUS01	GAS?	42000	3725	347	1,215	$69	$1,488	21.5
5626	5626ACFUS02	GAS?	42000	3725	347	1,215	$69	$1,488	21.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
5626	5626ACUW01-X	HP	23000	3725	347	665	$38	$815	21.5
5626	5626ACUW02-X	HP	23000	3725	347	665	$38	$815	21.5
5626	5626ACUW03-X	HP	23000	3725	347	665	$38	$815	21.5
5627	5627ACFUS01		36000	3725	347	1,041	$59	$1,275	21.5
5627	5627ACFUS03		36000	3725	347	1,041	$59	$1,275	21.5
5627	5627ACFUS04		0	3725	347	0	$0	$0	N/A
5627	5627ACFUS05		0	3725	347	0	$0	$0	N/A
5627	5627ACFUS07		36000	3725	347	1,041	$59	$1,275	21.5
5627	5627ACFUS08		36000	3725	347	1,041	$59	$1,275	21.5
5627	5627ACFUS02	GAS?	42000	3725	347	1,215	$69	$1,488	21.5
5627	5627ACFUS06	GAS?	42000	3725	347	1,215	$69	$1,488	21.5
5627	5627ACFUS09	GAS?	42000	3725	347	1,215	$69	$1,488	21.5
5974	5974ACHPS01-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5974	5974ACHPS02-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5974	5974ACHPS03-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5974	5974ACHPS04-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5974	5974ACHPS05-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5974	5974ACHPS06-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5974	5974ACHPS07-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5974	5974ACHPS08-X	HP	29600	1735	651	1,606	$92	$1,048	11.5
5975	5975ACHPS07-X		36000	1735	651	1,953	$111	$1,275	11.5
5975	5975ACHPS01-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
5975	5975ACHPS02-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
5975	5975ACHPS03-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
5975	5975ACHPS04-X	HP	36000	1735	651	1,953	$111	$1,275	11.5
5975	5975ACHPS05-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
5975	5975ACHPS08-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
5975	5975ACHPS09-X	HP	35400	1735	651	1,920	$109	$1,254	11.5
5976	5976ACS01-1		90000	1735	651	4,883	$278	$3,188	11.5
5976	5976ACS02-2		60000	1735	651	3,255	$186	$2,125	11.5
5977	5977ACHPS01-X	HP	22600	1735	651	1,226	$70	$800	11.5
5977	5977ACHPS02-X	HP	22600	1735	651	1,226	$70	$800	11.5
5977	5977ACHPS03-X	HP	22600	1735	651	1,226	$70	$800	11.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
5977	5977ACHPS04-X	HP	22600	1735	651	1,226	$70	$800	11.5
5977	5977ACHPS05-X	HP	22600	1735	651	1,226	$70	$800	11.5
5977	5977ACHPS06-X	HP	22600	1735	651	1,226	$70	$800	11.5
5977	5977ACHPS07-X	HP	22600	1735	651	1,226	$70	$800	11.5
5977	5977ACHPS08-X	HP	22600	1735	651	1,226	$70	$800	11.5
5977	5977ACHPS09-X	HP	22600	1735	651	1,226	$70	$800	11.5
5978	5978ACS01-1		36000	1735	651	1,953	$111	$1,275	11.5
5978	5978ACHPS02-X	R	35200	1735	736	2,159	$123	$1,247	10.1
5978	5978ACHPS03-X	R	35200	1735	736	2,159	$123	$1,247	10.1
5978	5978ACHPS04-X	R	35200	1735	736	2,159	$123	$1,247	10.1
5978	5978ACHPS06-X	R	35200	1735	736	2,159	$123	$1,247	10.1
5978	5978ACHPS07-X	R	35200	1735	736	2,159	$123	$1,247	10.1
5978	5978ACHPS09-X	R	35200	1735	736	2,159	$123	$1,247	10.1
5979	5979ACHPS04		36000	1735	651	1,953	$111	$1,275	11.5
5979	5979ACHPS05		36000	1735	651	1,953	$111	$1,275	11.5
5979	5979ACHPS06		36000	1735	651	1,953	$111	$1,275	11.5
5979	5979ACHPS07		36000	1735	651	1,953	$111	$1,275	11.5
5979	5979ACHPS08		36000	1735	651	1,953	$111	$1,275	11.5
5979	5979ACHPS01-X	HP	28000	1735	651	1,519	$87	$992	11.5
5979	5979ACHPS02-X	HP	28000	1735	651	1,519	$87	$992	11.5
5979	5979ACHPS03-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS01-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS02-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS03-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS04-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS05-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS06-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS07-X	HP	28000	1735	651	1,519	$87	$992	11.5
5980	5980ACHPS08-X	HP	28000	1735	651	1,519	$87	$992	11.5
5981	5981ACHPS01-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5981	5981ACHPS02-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5981	5981ACHPS03-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5981	5981ACHPS04-X	R	31200	1735	736	1,914	$109	$1,105	10.1

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
5981	5981ACHPS05-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5981	5981ACHPS06-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5981	5981ACHPS07-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5981	5981ACHPS08-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5981	5981ACS01-X	R	46500	1735	736	2,852	$163	$1,647	10.1
5982	5982ACHPS03-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5982	5982ACHPS05-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5982	5982ACHPS06-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5982	5982ACHPS08-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS01-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS02-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS03-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS04-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS05-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS06-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS07-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5983	5983ACHPS08-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACU01-1		24000	1735	651	1,302	$74	$850	11.5
5984	5984ACHPS01-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACHPS02-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACHPS03-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACHPS04-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACHPS05-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACHPS06-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACHPS07-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5984	5984ACHPS08-X	R	31200	1735	736	1,914	$109	$1,105	10.1
5985	5985ACHPS01	R	31200	1735	736	1,914	$109	$1,105	10.1
5985	5985ACHPS05	R	31200	1735	736	1,914	$109	$1,105	10.1
5985	5985ACHPS06	R	31200	1735	736	1,914	$109	$1,105	10.1
5985	5985ACHPS07	R	31200	1735	736	1,914	$109	$1,105	10.1
5985	5985ACHPS08	R	31200	1735	736	1,914	$109	$1,105	10.1
6127	6127ACHPS01	HP	56500	3725	347	1,634	$93	$2,001	21.5
6127	6127ACHPS02	HP	35600	3725	347	1,029	$59	$1,261	21.5

SiteID	EQUIPMENT-ID	Heat Type	Capacity	Model building	Energy Savings (kWh/ton)	kWh savings	Energy cost savings	Incremental cost	SPB
6178	6178ACUW01-X		0	2701	1947	0	$0	$0	N/A
6179	6179ACHPS01	HP	47000	3725	347	1,359	$77	$1,665	21.5
6179	6179ACHPS02	HP	35400	3725	347	1,024	$58	$1,254	21.5
6179	6179ACHPS03	HP	47000	3725	347	1,359	$77	$1,665	21.5
6179	6179ACS01	R	35000	3725	498	1,453	$83	$1,240	15.0
6203	6203ACS02-X	HP	23000	1735	651	1,248	$71	$815	11.5
6205	3595ACHPS01-X		36000	1735	651	1,953	$111	$1,275	11.5
6525	6525ACHPS01	R	36000	2627	1077	3,231	$184	$1,275	6.9
6525	6525ACHPS02	R	36000	2627	1077	3,231	$184	$1,275	6.9
6925	6925ACHPS01	HP	24800	3725	347	717	$41	$878	21.5
6925	6925ACHPS02	HP	24800	3725	347	717	$41	$878	21.5
6925	6925ACHPS03	HP	24800	3725	347	717	$41	$878	21.5
6925	6925ACHPS04	HP	24800	3725	347	717	$41	$878	21.5
6925	6925ACHPS05	HP	26800	3725	347	775	$44	$949	21.5
6925	6925ACHPS06	HP	24800	3725	347	717	$41	$878	21.5
6925	6925ACHPS07	HP	26800	3725	347	775	$44	$949	21.5
6925	6925ACHPS08	HP	26800	3725	347	775	$44	$949	21.5
6925	6925ACHPS09-X	HP	35600	3725	347	1,029	$59	$1,261	21.5
6925	6925ACHPS10-X	HP	35600	3725	347	1,029	$59	$1,261	21.5
6925	6925ACHPS11-X	HP	35600	3725	347	1,029	$59	$1,261	21.5
6926	6926ACHPS01		36000	3725	347	1,041	$59	$1,275	21.5
6926	6926ACHPS02		36000	3725	347	1,041	$59	$1,275	21.5
6926	6926ACHPS03		36000	3725	347	1,041	$59	$1,275	21.5
6928	6928ACS01-X	R	36000	1735	736	2,208	$126	$1,275	10.1
6928	6928ACS02-X	R	36000	1735	736	2,208	$126	$1,275	10.1
6928	6928ACS03-X	R	36000	1735	736	2,208	$126	$1,275	10.1
6951	6951ACUW02		6000	2627	1031	516	$29	$213	7.2
6951	6951ACHPS01-X	HP	47000	2627	1031	4,038	$230	$1,665	7.2
6951	6951ACHPS02-X	HP	47000	2627	1031	4,038	$230	$1,665	7.2

Appendix K. Whole Facility Savings for Super T-8 Measure

SiteID	GROSS SF	HP%	R%	Model building	Energy savings (kWh/SF) with heat pump	Energy savings (kWh/SF) with elec resistance heat	kWh savings	Energy Cost Savings	Measure cost/SF	Incremental measure cost	SPB
004J	7110	100%	0%	2627	0.45	0.43	3,200	$182	$0.053	$374	2.1
110	150	100%	0%	1886	0.43	0.39	65	$4	$0.057	$9	2.3
125	12871	100%	0%	4128	0.5	0.48	6,436	$367	$0.069	$892	2.4
1277	4058	100%	0%	1602	0.8	0.8	3,246	$185	$0.080	$327	1.8
1280	5644	0%	100%	1735	0.37	0.36	2,032	$116	$0.033	$184	1.6
134	1284	100%	0%	1886	0.43	0.39	552	$31	$0.057	$73	2.3
135	1338	100%	0%	1886	0.43	0.39	575	$33	$0.057	$76	2.3
1401	5113	91%	9%	1735	0.37	0.36	1,887	$108	$0.033	$167	1.5
1402	5113	40%	60%	1735	0.37	0.36	1,861	$106	$0.033	$167	1.6
1403	5113	100%	0%	1735	0.37	0.36	1,892	$108	$0.033	$167	1.5
1404	5226	71%	29%	1735	0.37	0.36	1,919	$109	$0.033	$170	1.6
1405	5113	76%	24%	1735	0.37	0.36	1,880	$107	$0.033	$167	1.6
1406	5200	95%	5%	1735	0.37	0.36	1,922	$110	$0.033	$169	1.5
1407	520	0%	100%	2701	1.98	1.85	962	$55	$0.074	$38	0.7
1408	184	45%	55%	4128	0.5	0.48	90	$5	$0.069	$13	2.5
1413	1040	100%	0%	5976	0.58	0.57	603	$34	$0.060	$63	1.8
1456	4914	0%	100%	1735	0.37	0.36	1,769	$101	$0.033	$160	1.6
1481	5275	0%	100%	1735	0.37	0.36	1,899	$108	$0.033	$172	1.6
1492	1040	0%	100%	1735	0.37	0.36	374	$21	$0.033	$34	1.6
1526	1380	0%	100%	1735	0.37	0.36	497	$28	$0.033	$45	1.6
1527	3841	0%	100%	1735	0.37	0.36	1,383	$79	$0.033	$125	1.6
1541	2149	100%	0%	1735	0.37	0.36	795	$45	$0.033	$70	1.5
1553	384	100%	0%	1735	0.37	0.36	142	$8	$0.033	$13	1.5
1578	6385	100%	0%	1735	0.37	0.36	2,362	$135	$0.033	$208	1.5
1579	1305	0%	100%	1735	0.37	0.36	470	$27	$0.033	$43	1.6
1601	2228	0%	100%	3725	0.45	0.42	936	$53	$0.065	$145	2.7
1602	2217	0%	100%	1886	0.43	0.39	865	$49	$0.057	$126	2.6
1632	4290	100%	0%	1735	0.37	0.36	1,587	$90	$0.033	$140	1.5
164	207	100%	0%	1602	0.8	0.8	166	$9	$0.080	$17	1.8

SiteID	GROSS SF	HP%	R%	Model building	Energy savings (kWh/SF) with heat pump	Energy savings (kWh/SF) with elec resistance heat	kWh savings	Energy Cost Savings	Measure cost/SF	Incremental measure cost	SPB
1677	28740	7%	93%	3725	0.45	0.42	12,128	$691	$0.065	$1,872	2.7
1678	3550	0%	100%	1735	0.37	0.36	1,278	$73	$0.033	$116	1.6
1680	5697	0%	100%	3725	0.45	0.42	2,393	$136	$0.065	$371	2.7
1713	335	0%	100%	2701	1.98	1.85	620	$35	$0.074	$25	0.7
1714	270	100%	0%	2701	1.98	1.85	535	$30	$0.074	$20	0.7
1715	528	100%	0%	1602	0.8	0.8	422	$24	$0.080	$42	1.8
1726	2160	50%	50%	3725	0.45	0.42	939	$54	$0.065	$141	2.6
1727	1837	62%	38%	1735	0.37	0.36	673	$38	$0.033	$60	1.6
1730	2100	0%	100%	1735	0.37	0.36	756	$43	$0.033	$68	1.6
1735	3261	100%	0%	1735	0.37	0.36	1,207	$69	$0.033	$106	1.5
1736	4526	0%	100%	3725	0.45	0.42	1,901	$108	$0.065	$295	2.7
1739	5724	94%	6%	3725	0.45	0.42	2,565	$146	$0.065	$373	2.6
1802	411	0%	100%	2701	1.98	1.85	760	$43	$0.074	$30	0.7
1826	3590	91%	9%	1735	0.37	0.36	1,325	$76	$0.033	$117	1.5
1830	6470	0%	100%	1735	0.37	0.36	2,329	$133	$0.033	$211	1.6
1878	6292	0%	100%	3725	0.45	0.42	2,643	$151	$0.065	$410	2.7
1879	11118	87%	13%	2627	0.45	0.43	4,973	$283	$0.053	$585	2.1
1884	2880	100%	0%	1735	0.37	0.36	1,066	$61	$0.033	$94	1.5
1885	4266	100%	0%	1735	0.37	0.36	1,578	$90	$0.033	$139	1.5
1886	3643	100%	0%	1602	0.8	0.8	2,914	$166	$0.080	$293	1.8
1887	5108	13%	87%	1735	0.37	0.36	1,846	$105	$0.033	$166	1.6
1888	11520	100%	0%	1735	0.37	0.36	4,262	$243	$0.033	$375	1.5
1889	17380	92%	8%	1735	0.37	0.36	6,417	$366	$0.033	$566	1.5
1925	2176	35%	65%	1735	0.37	0.36	791	$45	$0.033	$71	1.6
1927	2160	100%	0%	1735	0.37	0.36	799	$46	$0.033	$70	1.5
193A	151	0%	100%	5976	0.58	0.57	86	$5	$0.060	$9	1.9
194A	240	100%	0%	1602	0.8	0.8	192	$11	$0.080	$19	1.8
195	400	0%	100%	1602	0.8	0.8	320	$18	$0.080	$32	1.8
196A	112	100%	0%	1886	0.43	0.39	48	$3	$0.057	$6	2.3
198	966	0%	100%	1602	0.8	0.8	773	$44	$0.080	$78	1.8
211	14206	0%	100%	3725	0.45	0.42	5,967	$340	$0.065	$925	2.7
2127	2133	100%	0%	3725	0.45	0.42	960	$55	$0.065	$139	2.5

SiteID	GROSS SF	HP%	R%	Model building	Energy savings (kWh/SF) with heat pump	Energy savings (kWh/SF) with elec resistance heat	kWh savings	Energy Cost Savings	Measure cost/SF	Incremental measure cost	SPB
2128	2000	27%	73%	3725	0.45	0.42	856	$49	$0.065	$130	2.7
2177	2160	83%	17%	1735	0.37	0.36	796	$45	$0.033	$70	1.6
2180	1643	0%	100%	1735	0.37	0.36	591	$34	$0.033	$54	1.6
2475	4949	100%	0%	3725	0.45	0.42	2,227	$127	$0.065	$322	2.5
252	192	100%	0%	1886	0.43	0.39	83	$5	$0.057	$11	2.3
2525	2160	0%	100%	1735	0.37	0.36	778	$44	$0.033	$70	1.6
2552	2100	100%	0%	1735	0.37	0.36	777	$44	$0.033	$68	1.5
2554	740	100%	0%	3725	0.45	0.42	333	$19	$0.065	$48	2.5
2580	4203	0%	100%	5976	0.58	0.57	2,396	$137	$0.060	$253	1.9
2625	240	100%	0%	2701	1.98	1.85	475	$27	$0.074	$18	0.7
2627	1867	0%	100%	2627	0.45	0.43	803	$46	$0.053	$98	2.1
2632	2202	100%	0%	1602	0.8	0.8	1,762	$100	$0.080	$177	1.8
2679	12310	41%	59%	1735	0.37	0.36	4,482	$255	$0.033	$401	1.6
2684	5284	33%	67%	1735	0.37	0.36	1,920	$109	$0.033	$172	1.6
2685	4320	23%	77%	1735	0.37	0.36	1,565	$89	$0.033	$141	1.6
2687	2100	33%	67%	1735	0.37	0.36	763	$43	$0.033	$68	1.6
2701	720	0%	100%	2701	1.98	1.85	1,332	$76	$0.074	$53	0.7
2726	2159	83%	17%	3725	0.45	0.42	961	$55	$0.065	$141	2.6
2727	4950	50%	50%	1735	0.37	0.36	1,807	$103	$0.033	$161	1.6
2728	2130	100%	0%	1602	0.8	0.8	1,704	$97	$0.080	$171	1.8
2775	9831	37%	63%	1735	0.37	0.36	3,576	$204	$0.033	$320	1.6
2777	1400	100%	0%	2627	0.45	0.43	630	$36	$0.053	$74	2.1
2787	2160	33%	67%	2701	1.98	1.85	4,088	$233	$0.074	$159	0.7
2801	2130	0%	100%	1735	0.37	0.36	767	$44	$0.033	$69	1.6
2802	2130	0%	100%	1735	0.37	0.36	767	$44	$0.033	$69	1.6
2804	720	0%	100%	1735	0.37	0.36	259	$15	$0.033	$23	1.6
2806	221	100%	0%	1602	0.8	0.8	177	$10	$0.080	$18	1.8
2808	238	0%	100%	2701	1.98	1.85	440	$25	$0.074	$18	0.7
2825	5922	87%	13%	3725	0.45	0.42	2,642	$151	$0.065	$386	2.6
2925	4909	94%	6%	3725	0.45	0.42	2,199	$125	$0.065	$320	2.6
3180	4300	78%	22%	1735	0.37	0.36	1,582	$90	$0.033	$140	1.6
3203	632	80%	20%	1602	0.8	0.8	506	$29	$0.080	$51	1.8

SiteID	GROSS SF	HP%	R%	Model building	Energy savings (kWh/SF) with heat pump	Energy savings (kWh/SF) with elec resistance heat	kWh savings	Energy Cost Savings	Measure cost/SF	Incremental measure cost	SPB
3204	647	0%	100%	1602	0.8	0.8	518	$30	$0.080	$52	1.8
3226	3077	40%	60%	3725	0.45	0.42	1,329	$76	$0.065	$200	2.6
328	372	100%	0%	1602	0.8	0.8	298	$17	$0.080	$30	1.8
328B	288	100%	0%	1602	0.8	0.8	230	$13	$0.080	$23	1.8
3340	2160	100%	0%	1735	0.37	0.36	799	$46	$0.033	$70	1.5
3427	6365	95%	5%	3725	0.45	0.42	2,854	$163	$0.065	$415	2.5
3520	9732	13%	87%	1735	0.37	0.36	3,516	$200	$0.033	$317	1.6
3526	2165	100%	0%	1735	0.37	0.36	801	$46	$0.033	$71	1.5
3527	9792	0%	100%	3725	0.45	0.42	4,113	$234	$0.065	$638	2.7
3555	508	0%	100%	1735	0.37	0.36	183	$10	$0.033	$17	1.6
3577	4614	39%	61%	1735	0.37	0.36	1,679	$96	$0.033	$150	1.6
3649	4800	100%	0%	4727	0.67	0.67	3,216	$183	$0.068	$325	1.8
367	625	33%	67%	3725	0.45	0.42	269	$15	$0.065	$41	2.7
3703	10068	19%	81%	1735	0.37	0.36	3,643	$208	$0.033	$328	1.6
3724	19810	0%	100%	3725	0.45	0.42	8,320	$474	$0.065	$1,291	2.7
3725	19815	0%	100%	3725	0.45	0.42	8,322	$474	$0.065	$1,291	2.7
3726	19824	0%	100%	3725	0.45	0.42	8,326	$475	$0.065	$1,291	2.7
3751	2240	67%	33%	1735	0.37	0.36	821	$47	$0.033	$73	1.6
376	1560	0%	100%	1602	0.8	0.8	1,248	$71	$0.080	$126	1.8
3775	1386	100%	0%	1735	0.37	0.36	513	$29	$0.033	$45	1.5
3777	6390	0%	100%	1735	0.37	0.36	2,300	$131	$0.033	$208	1.6
379	1500	93%	7%	1602	0.8	0.8	1,200	$68	$0.080	$121	1.8
382	292	100%	0%	1602	0.8	0.8	234	$13	$0.080	$23	1.8
3925	1081	0%	100%	2627	0.45	0.43	465	$26	$0.053	$57	2.1
406	345	0%	100%	1602	0.8	0.8	276	$16	$0.080	$28	1.8
4107	382	0%	100%	1886	0.43	0.39	149	$8	$0.057	$22	2.6
4128	960	100%	0%	4128	0.5	0.48	480	$27	$0.069	$67	2.4
4161	1229	0%	100%	1735	0.37	0.36	442	$25	$0.033	$40	1.6
4180	3120	81%	19%	1735	0.37	0.36	1,148	$65	$0.033	$102	1.6
4182	5180	100%	0%	1735	0.37	0.36	1,917	$109	$0.033	$169	1.5
4184	4000	63%	37%	1735	0.37	0.36	1,465	$84	$0.033	$130	1.6
4302	5022	40%	60%	1735	0.37	0.36	1,828	$104	$0.033	$164	1.6

SiteID	GROSS SF	HP%	R%	Model building	Energy savings (kWh/SF) with heat pump	Energy savings (kWh/SF) with elec resistance heat	kWh savings	Energy Cost Savings	Measure cost/SF	Incremental measure cost	SPB
4316	299	0%	100%	1886	0.43	0.39	117	$7	$0.057	$17	2.6
4325	2130	0%	100%	1735	0.37	0.36	767	$44	$0.033	$69	1.6
4352	240	100%	0%	1602	0.8	0.8	192	$11	$0.080	$19	1.8
4377	4920	36%	64%	1735	0.37	0.36	1,789	$102	$0.033	$160	1.6
4378	5180	57%	43%	1735	0.37	0.36	1,894	$108	$0.033	$169	1.6
4382	3600	100%	0%	1735	0.37	0.36	1,332	$76	$0.033	$117	1.5
4383	5003	49%	51%	1735	0.37	0.36	1,826	$104	$0.033	$163	1.6
4384	1577	49%	51%	1735	0.37	0.36	576	$33	$0.033	$51	1.6
4385	3744	100%	0%	1735	0.37	0.36	1,385	$79	$0.033	$122	1.5
4387	3658	61%	39%	1735	0.37	0.36	1,339	$76	$0.033	$119	1.6
4388	320	100%	0%	2701	1.98	1.85	634	$36	$0.074	$24	0.7
4406	1560	0%	100%	1735	0.37	0.36	562	$32	$0.033	$51	1.6
4407	299	0%	100%	1886	0.43	0.39	117	$7	$0.057	$17	2.6
4442	5760	13%	87%	1735	0.37	0.36	2,081	$119	$0.033	$188	1.6
4475	4176	100%	0%	1602	0.8	0.8	3,341	$190	$0.080	$336	1.8
4509	203	0%	100%	1886	0.43	0.39	79	$5	$0.057	$12	2.6
4525	5713	100%	0%	3725	0.45	0.42	2,571	$147	$0.065	$372	2.5
4576	848	100%	0%	5976	0.58	0.57	492	$28	$0.060	$51	1.8
4675	11236	93%	7%	4128	0.5	0.48	5,602	$319	$0.069	$778	2.4
4725	9265	0%	100%	5976	0.58	0.57	5,281	$301	$0.060	$557	1.9
4726	9362	0%	100%	3725	0.45	0.42	3,932	$224	$0.065	$610	2.7
4727	9909	0%	100%	4727	0.67	0.67	6,639	$378	$0.068	$671	1.8
4728	6710	0%	100%	4727	0.67	0.67	4,496	$256	$0.068	$454	1.8
4729	9986	0%	100%	4727	0.67	0.67	6,691	$381	$0.068	$676	1.8
473	196	100%	0%	1886	0.43	0.39	84	$5	$0.057	$11	2.3
4924	638	100%	0%	1735	0.37	0.36	236	$13	$0.033	$21	1.5
501	200	100%	0%	3725	0.45	0.42	90	$5	$0.065	$13	2.5
5104	624	0%	100%	1735	0.37	0.36	225	$13	$0.033	$20	1.6
5105	510	17%	83%	1735	0.37	0.36	184	$11	$0.033	$17	1.6
5125	2912	88%	12%	1735	0.37	0.36	1,074	$61	$0.033	$95	1.5
517A	462	0%	100%	1602	0.8	0.8	370	$21	$0.080	$37	1.8
518A	195	100%	0%	1886	0.43	0.39	84	$5	$0.057	$11	2.3

SiteID	GROSS SF	HP%	R%	Model building	Energy savings (kWh/SF) with heat pump	Energy savings (kWh/SF) with elec resistance heat	kWh savings	Energy Cost Savings	Measure cost/SF	Incremental measure cost	SPB
519A	401	100%	0%	1886	0.43	0.39	172	$10	$0.057	$23	2.3
520	400	100%	0%	1886	0.43	0.39	172	$10	$0.057	$23	2.3
5207	320	0%	100%	1886	0.43	0.39	125	$7	$0.057	$18	2.6
5225	1960	100%	0%	1735	0.37	0.36	725	$41	$0.033	$64	1.5
5226	2548	47%	53%	1735	0.37	0.36	929	$53	$0.033	$83	1.6
523	3507	100%	0%	1602	0.8	0.8	2,806	$160	$0.080	$282	1.8
531	12589	0%	100%	1602	0.8	0.8	10,071	$574	$0.080	$1,013	1.8
532	215	100%	0%	1886	0.43	0.39	92	$5	$0.057	$12	2.3
533	320	100%	0%	1886	0.43	0.39	138	$8	$0.057	$18	2.3
5425	5260	64%	36%	1735	0.37	0.36	1,927	$110	$0.033	$171	1.6
5426	5180	55%	45%	1735	0.37	0.36	1,893	$108	$0.033	$169	1.6
5475	32409	86%	14%	3725	0.45	0.42	14,448	$824	$0.065	$2,111	2.6
5477	6650	100%	0%	3725	0.45	0.42	2,993	$171	$0.065	$433	2.5
5626	4372	31%	69%	3725	0.45	0.42	1,876	$107	$0.065	$285	2.7
5627	8415	3%	97%	3725	0.45	0.42	3,542	$202	$0.065	$548	2.7
5675	4259	100%	0%	3725	0.45	0.42	1,917	$109	$0.065	$277	2.5
571	41954	3%	97%	3725	0.45	0.42	17,660	$1,007	$0.065	$2,733	2.7
597	260	0%	100%	3725	0.45	0.42	109	$6	$0.065	$17	2.7
5974	5781	91%	9%	1735	0.37	0.36	2,134	$122	$0.033	$188	1.5
5975	6480	89%	11%	1735	0.37	0.36	2,390	$136	$0.033	$211	1.5
5976	6209	25%	75%	1735	0.37	0.36	2,251	$128	$0.033	$202	1.6
5977	6340	100%	0%	1735	0.37	0.36	2,346	$134	$0.033	$206	1.5
5978	6480	30%	70%	1735	0.37	0.36	2,352	$134	$0.033	$211	1.6
5979	5680	100%	0%	1735	0.37	0.36	2,102	$120	$0.033	$185	1.5
597A	99	100%	0%	2701	1.98	1.85	196	$11	$0.074	$7	0.7
5980	5680	100%	0%	1735	0.37	0.36	2,102	$120	$0.033	$185	1.5
5981	5744	0%	100%	1735	0.37	0.36	2,068	$118	$0.033	$187	1.6
5982	5742	12%	88%	1735	0.37	0.36	2,074	$118	$0.033	$187	1.6
5983	5680	0%	100%	1735	0.37	0.36	2,045	$117	$0.033	$185	1.6
5984	5680	0%	100%	1735	0.37	0.36	2,045	$117	$0.033	$185	1.6
5985	5680	12%	88%	1735	0.37	0.36	2,052	$117	$0.033	$185	1.6
6127	1560	100%	0%	3725	0.45	0.42	702	$40	$0.065	$102	2.5

SiteID	GROSS SF	HP%	R%	Model building	Energy savings (kWh/SF) with heat pump	Energy savings (kWh/SF) with elec resistance heat	kWh savings	Energy Cost Savings	Measure cost/SF	Incremental measure cost	SPB
612A	4283	100%	0%	1886	0.43	0.39	1,842	$105	$0.057	$244	2.3
614	1188	100%	0%	1886	0.43	0.39	511	$29	$0.057	$68	2.3
6178	1040	54%	46%	2701	1.98	1.85	1,997	$114	$0.074	$77	0.7
6179	3904	73%	27%	3725	0.45	0.42	1,726	$98	$0.065	$254	2.6
619	2047	66%	34%	1886	0.43	0.39	853	$49	$0.057	$116	2.4
6203	2185	75%	25%	1735	0.37	0.36	803	$46	$0.033	$71	1.6
6205	404	100%	0%	1735	0.37	0.36	149	$9	$0.033	$13	1.5
622	1039	100%	0%	1886	0.43	0.39	447	$25	$0.057	$59	2.3
623	146	100%	0%	1886	0.43	0.39	63	$4	$0.057	$8	2.3
624	240	76%	24%	3725	0.45	0.42	106	$6	$0.065	$16	2.6
625	4800	0%	100%	1886	0.43	0.39	1,872	$107	$0.057	$273	2.6
6325	4320	100%	0%	3725	0.45	0.42	1,944	$111	$0.065	$281	2.5
639	448	100%	0%	1886	0.43	0.39	193	$11	$0.057	$25	2.3
6501	875	100%	0%	1735	0.37	0.36	324	$18	$0.033	$28	1.5
6525	960	0%	100%	2627	0.45	0.43	413	$24	$0.053	$51	2.1
6526	2513	77%	23%	1735	0.37	0.36	924	$53	$0.033	$82	1.6
6527	2100	0%	100%	1735	0.37	0.36	756	$43	$0.033	$68	1.6
6575	1407	100%	0%	2627	0.45	0.43	633	$36	$0.053	$74	2.1
671	41978	64%	36%	3725	0.45	0.42	18,432	$1,051	$0.065	$2,735	2.6
684	310	100%	0%	1886	0.43	0.39	133	$8	$0.057	$18	2.3
6870	1325	100%	0%	1735	0.37	0.36	490	$28	$0.033	$43	1.5
6901	520	100%	0%	1886	0.43	0.39	224	$13	$0.057	$30	2.3
6925	5831	100%	0%	3725	0.45	0.42	2,624	$150	$0.065	$380	2.5
6926	2160	83%	17%	3725	0.45	0.42	961	$55	$0.065	$141	2.6
6928	1886	0%	100%	1735	0.37	0.36	679	$39	$0.033	$61	1.6
6951	1440	94%	6%	2627	0.45	0.43	646	$37	$0.053	$76	2.1
	901,651						399,051	$22,746		$46,401	2.0

Appendix L. Whole Facility Savings for Occupancy Sensor Measure

SiteID	GROSS SF	HP%	R%	Model building	Energy Savings (kWh/SF) for buildings with heat pumps	Energy Savings (kWh/SF) for buildings with electric heat	kWh savings	Energy cost savings	Measure cost	SPB
110	150	100%	0%	1886	0.62	0.56	93	$5	$60	11.3
1277	4,058	100%	0%	1602	1.14	1.14	4,626	$264	$1,623	6.2
1401	5,113	91%	9%	1735	0.53	0.52	2,705	$154	$2,045	13.3
1402	5,113	40%	60%	1735	0.53	0.52	2,679	$153	$2,045	13.4
1403	5,113	100%	0%	1735	0.53	0.52	2,710	$154	$2,045	13.2
1404	5,226	71%	29%	1735	0.53	0.52	2,755	$157	$2,090	13.3
1405	5,113	76%	24%	1735	0.53	0.52	2,698	$154	$2,045	13.3
1406	5,200	95%	5%	1735	0.53	0.52	2,754	$157	$2,080	13.3
1408	184	45%	55%	4128	0.71	0.68	128	$7	$74	10.1
1413	1,040	100%	0%	5976	0.82	0.81	853	$49	$416	8.6
1456	4,914	0%	100%	1735	0.53	0.52	2,555	$146	$1,966	13.5
1481	5,275	0%	100%	1735	0.53	0.52	2,743	$156	$2,110	13.5
1492	1,040	0%	100%	1735	0.53	0.52	541	$31	$416	13.5
1527	3,841	0%	100%	1735	0.53	0.52	1,997	$114	$1,536	13.5
1541	2,149	100%	0%	1735	0.53	0.52	1,139	$65	$860	13.2
1579	1,305	0%	100%	1735	0.53	0.52	679	$39	$522	13.5
1601	2,228	0%	100%	3725	0.65	0.6	1,337	$76	$891	11.7
1602	2,217	0%	100%	1886	0.62	0.56	1,242	$71	$887	12.5
1677	28,740	7%	93%	3725	0.65	0.6	17,339	$988	$11,496	11.6
1678	3,550	0%	100%	1735	0.53	0.52	1,846	$105	$1,420	13.5
1680	5,697	0%	100%	3725	0.65	0.6	3,418	$195	$2,279	11.7
1714	270	100%	0%	2701	2.82	2.63	761	$43	$108	2.5
1802	411	0%	100%	2701	2.82	2.63	1,081	$62	$164	2.7
1887	5,108	13%	87%	1735	0.53	0.52	2,663	$152	$2,043	13.5
2128	2,000	27%	73%	3725	0.65	0.6	1,227	$70	$800	11.4
2177	2,160	83%	17%	1735	0.53	0.52	1,141	$65	$864	13.3
2475	4,949	100%	0%	3725	0.65	0.6	3,217	$183	$1,980	10.8

SiteID	GROSS SF	HP%	R%	Model building	Energy Savings (kWh/SF) for buildings with heat pumps	Energy Savings (kWh/SF) for buildings with electric heat	kWh savings	Energy cost savings	Measure cost	SPB
2525	2,160	0%	100%	1735	0.53	0.52	1,123	$64	$864	13.5
2552	2,100	100%	0%	1735	0.53	0.52	1,113	$63	$840	13.2
2554	740	100%	0%	3725	0.65	0.6	481	$27	$296	10.8
2625	240	100%	0%	2701	2.82	2.63	677	$39	$96	2.5
2627	1,867	0%	100%	2627	0.64	0.62	1,158	$66	$747	11.3
2684	5,284	33%	67%	1735	0.53	0.52	2,765	$158	$2,114	13.4
2685	4,320	23%	77%	1735	0.53	0.52	2,256	$129	$1,728	13.4
2687	2,100	33%	67%	1735	0.53	0.52	1,099	$63	$840	13.4
2727	4,950	50%	50%	1735	0.53	0.52	2,599	$148	$1,980	13.4
2728	2,130	100%	0%	1602	1.14	1.14	2,428	$138	$852	6.2
2775	9,831	37%	63%	1735	0.53	0.52	5,148	$293	$3,932	13.4
2777	1,400	100%	0%	2627	0.64	0.62	896	$51	$560	11.0
2787	2,160	33%	67%	2701	2.82	2.63	5,816	$331	$864	2.6
2804	720	0%	100%	1735	0.53	0.52	374	$21	$288	13.5
3180	4,300	78%	22%	1735	0.53	0.52	2,270	$129	$1,720	13.3
3203	632	80%	20%	1602	1.14	1.14	720	$41	$253	6.2
3204	647	0%	100%	1602	1.14	1.14	738	$42	$259	6.2
3226	3,077	40%	60%	3725	0.65	0.6	1,907	$109	$1,231	11.3
3526	2,165	100%	0%	1735	0.53	0.52	1,147	$65	$866	13.2
3527	9,792	0%	100%	3725	0.65	0.6	5,875	$335	$3,917	11.7
3555	508	0%	100%	1735	0.53	0.52	264	$15	$203	13.5
367	625	33%	67%	3725	0.65	0.6	385	$22	$250	11.4
3703	10,068	19%	81%	1735	0.53	0.52	5,254	$299	$4,027	13.4
376	1,560	0%	100%	1602	1.14	1.14	1,778	$101	$624	6.2
3775	1,386	100%	0%	1735	0.53	0.52	735	$42	$554	13.2
379	1,500	93%	7%	1602	1.14	1.14	1,710	$97	$600	6.2
382	292	100%	0%	1602	1.14	1.14	333	$19	$117	6.2
406	345	0%	100%	1602	1.14	1.14	393	$22	$138	6.2
4107	382	0%	100%	1886	0.62	0.56	214	$12	$153	12.5
4128	960	100%	0%	4128	0.71	0.68	682	$39	$384	9.9

SiteID	GROSS SF	HP%	R%	Model building	Energy Savings (kWh/SF) for buildings with heat pumps	Energy Savings (kWh/SF) for buildings with electric heat	kWh savings	Energy cost savings	Measure cost	SPB
4161	1,229	0%	100%	1735	0.53	0.52	639	$36	$492	13.5
4180	3,120	81%	19%	1735	0.53	0.52	1,648	$94	$1,248	13.3
4182	5,180	100%	0%	1735	0.53	0.52	2,745	$156	$2,072	13.2
4184	4,000	63%	37%	1735	0.53	0.52	2,105	$120	$1,600	13.3
4316	299	0%	100%	1886	0.62	0.56	167	$10	$120	12.5
4352	240	100%	0%	1602	1.14	1.14	274	$16	$96	6.2
4377	4,920	36%	64%	1735	0.53	0.52	2,576	$147	$1,968	13.4
4382	3,600	100%	0%	1735	0.53	0.52	1,908	$109	$1,440	13.2
4388	320	100%	0%	2701	2.82	2.63	902	$51	$128	2.5
4406	1,560	0%	100%	1735	0.53	0.52	811	$46	$624	13.5
4407	299	0%	100%	1886	0.62	0.56	167	$10	$120	12.5
4576	848	100%	0%	5976	0.82	0.81	695	$40	$339	8.6
4725	9,265	0%	100%	5976	0.82	0.81	7,505	$428	$3,706	8.7
4727	9,909	0%	100%	4727	0.96	0.96	9,513	$542	$3,964	7.3
4729	9,986	0%	100%	4727	0.96	0.96	9,587	$546	$3,994	7.3
473	196	100%	0%	1886	0.62	0.56	122	$7	$78	11.3
4924	638	100%	0%	1735	0.53	0.52	338	$19	$255	13.2
501	200	100%	0%	3725	0.65	0.6	130	$7	$80	10.8
5104	624	0%	100%	1735	0.53	0.52	324	$18	$250	13.5
5105	510	17%	83%	1735	0.53	0.52	266	$15	$204	13.5
5207	320	0%	100%	1886	0.62	0.56	179	$10	$128	12.5
5225	1,960	100%	0%	1735	0.53	0.52	1,039	$59	$784	13.2
5226	2,548	47%	53%	1735	0.53	0.52	1,337	$76	$1,019	13.4
523	3,507	100%	0%	1602	1.14	1.14	3,998	$228	$1,403	6.2
531	12,589	0%	100%	1602	1.14	1.14	14,351	$818	$5,036	6.2
533	320	100%	0%	1886	0.62	0.56	198	$11	$128	11.3
5426	5,180	55%	45%	1735	0.53	0.52	2,722	$155	$2,072	13.4
5475	32,409	86%	14%	3725	0.65	0.6	20,839	$1,188	$12,964	10.9
5976	6,209	25%	75%	1735	0.53	0.52	3,244	$185	$2,484	13.4
5978	6,480	30%	70%	1735	0.53	0.52	3,389	$193	$2,592	13.4

SiteID	GROSS SF	HP%	R%	Model building	Energy Savings (kWh/SF) for buildings with heat pumps	Energy Savings (kWh/SF) for buildings with electric heat	kWh savings	Energy cost savings	Measure cost	SPB
5981	5,744	0%	100%	1735	0.53	0.52	2,987	$170	$2,298	13.5
5982	5,742	12%	88%	1735	0.53	0.52	2,993	$171	$2,297	13.5
5983	5,680	0%	100%	1735	0.53	0.52	2,954	$168	$2,272	13.5
5984	5,680	0%	100%	1735	0.53	0.52	2,954	$168	$2,272	13.5
5985	5,680	12%	88%	1735	0.53	0.52	2,960	$169	$2,272	13.5
6127	1,560	100%	0%	3725	0.65	0.6	1,014	$58	$624	10.8
6178	1,040	54%	46%	2701	2.82	2.63	2,842	$162	$416	2.6
6179	3,904	73%	27%	3725	0.65	0.6	2,486	$142	$1,562	11.0
619	2,047	66%	34%	1886	0.62	0.56	1,228	$70	$819	11.7
6203	2,185	75%	25%	1735	0.53	0.52	1,152	$66	$874	13.3
6205	404	100%	0%	1735	0.53	0.52	214	$12	$162	13.2
622	1,039	100%	0%	1886	0.62	0.56	644	$37	$416	11.3
624	240	76%	24%	3725	0.65	0.6	153	$9	$96	11.0
6501	875	100%	0%	1735	0.53	0.52	464	$26	$350	13.2
6525	960	0%	100%	2627	0.64	0.62	595	$34	$384	11.3
6526	2,513	77%	23%	1735	0.53	0.52	1,326	$76	$1,005	13.3
6527	2,100	0%	100%	1735	0.53	0.52	1,092	$62	$840	13.5
684	310	100%	0%	1886	0.62	0.56	192	$11	$124	11.3
6926	2,160	83%	17%	3725	0.65	0.6	1,386	$79	$864	10.9
6928	1,886	0%	100%	1735	0.53	0.52	981	$56	$754	13.5
	370,619						243,602	$13,885	$148,248	10.7

Appendix M. Whole Facility Savings for Remaining Lighting Measures

Interior Lighting

Building ID	Fixture Description	Existing fixture watts	Repl. fixture watts	Fixture Count	Annual Op. Hrs	kWh Savings	Energy Cost Savings	Measure unit cost	Total measure cost	SPB
1413	Fluorescent, (2) 48", STD lamp	96	62	26	2490	2,201	$125	$30	$780	6.2
1481	Fluorescent, (2) 48", STD lamp	96	62	24	2739	2,235	$127	$30	$720	5.7
1492	Fluorescent, (2) 96", STD lamp	173	110	15	2864	2,706	$154	$58	$870	5.6
1526	Fluorescent, (2) 96", STD lamp	173	110	3	2241	424	$24	$58	$174	7.2
1541	Fluorescent, (4) 48", STD lamp	172	110	22	2988	4,076	$232	$37	$814	3.5
1578	Incandescent, (1) 75W lamp	75	20	15	2241	1,849	$105	$15	$225	2.1
1678	Fluorescent, (2) 48", STD lamp	96	62	43	2864	4,186	$239	$30	$1,290	5.4
1678	Fluorescent, (2) 48", STD lamp	96	62	2	2864	195	$11	$30	$60	5.4
1713	Fluorescent, (2) 48", STD lamp	96	62	6	8760	1,787	$102	$30	$180	1.8
1713	Incandescent, (2) 25W lamp	50	15	1	8760	307	$17	$15	$15	0.9
1714	Fluorescent, (4) 48", STD lamp	192	110	4	8760	2,873	$164	$37	$148	0.9
1730	Fluorescent, (2) 48", STD lamp	96	62	4	2490	339	$19	$30	$120	6.2
1730	Fluorescent, (4) 48", STD lamp	192	110	32	2490	6,534	$372	$37	$1,184	3.2
1735	Incandescent, (1) 100W lamp	100	23	1	2490	192	$11	$15	$15	1.4
1735	Incandescent, (1) 75W lamp	75	20	3	2490	411	$23	$15	$45	1.9
1802	Fluorescent, (2) 48", STD lamp	96	62	5	8760	1,489	$85	$30	$150	1.8
1802	Incandescent, (1) 75W lamp	75	20	5	8760	2,409	$137	$15	$75	0.5
1887	Fluorescent, (2) 48", STD lamp	96	62	11	2864	1,071	$61	$30	$330	5.4
198	Fluorescent, (2) 48", STD lamp	96	62	6	2241	457	$26	$30	$180	6.9
198	Fluorescent, (2) 96", STD lamp	173	110	6	2241	847	$48	$58	$348	7.2
2525	Fluorescent, (4) 48", STD lamp	192	110	38	2241	6,983	$398	$37	$1,406	3.5
2701	Incandescent, (1) 50W lamp	50	15	8	8760	2,453	$140	$15	$120	0.9
2727	Fluorescent, (2) 48", STD lamp	96	62	120	4380	17,870	$1,019	$30	$3,600	3.5
2777	Fluorescent, (2) 48", STD lamp	96	62	6	2241	457	$26	$30	$180	6.9
2808	Fluorescent, (1) 48", STD lamp	57	30	6	8760	1,419	$81	$26	$156	1.9
3203	Fluorescent, (4) 48", STD lamp	192	110	11	2241	2,021	$115	$37	$407	3.5
3204	Fluorescent, (4) 48", STD lamp	192	110	6	2739	1,348	$77	$37	$222	2.9
3226	Incandescent, (1) 90W lamp	90	23	13	2739	2,386	$136	$15	$195	1.4
3526	Fluorescent, (2) 48", STD lamp	96	62	27	2241	2,057	$117	$30	$810	6.9
3555	Fluorescent, (2) 48", STD lamp	96	62	7	1494	356	$20	$30	$210	10.4
367	Fluorescent, (2) 48", STD lamp	96	62	8	2473	673	$38	$30	$240	6.3
376	Fluorescent, (3) 48", STD lamp	153	89	24	2241	3,442	$196	$33	$792	4.0
3775	Fluorescent, (2) 48", STD lamp	96	62	3	2241	229	$13	$30	$90	6.9
3775	Fluorescent, (4) 48", STD lamp	192	110	15	2241	2,756	$157	$37	$555	3.5
379	Fluorescent, (2) 48", STD lamp	96	62	18	2241	1,371	$78	$30	$540	6.9

Building ID	Fixture Description	Existing fixture watts	Repl. fixture watts	Fixture Count	Annual Op. Hrs	kWh Savings	Energy Cost Savings	Measure unit cost	Total measure cost	SPB
379	Fluorescent, (3) 48", STD lamp	153	89	11	2241	1,578	$90	$33	$363	4.0
382	Fluorescent, (2) 96", STD lamp	173	110	2	2490	314	$18	$58	$116	6.5
3925	Fluorescent, (2) 48", STD lamp	96	62	8	2241	610	$35	$30	$240	6.9
3925	Incandescent, (1) 52W lamp	52	15	14	2241	1,161	$66	$15	$210	3.2
4107	Fluorescent, (2) 48", STD lamp	96	62	4	2241	305	$17	$30	$120	6.9
4161	Fluorescent, (2) 48", STD lamp	96	62	9	2490	762	$43	$30	$270	6.2
4161	Fluorescent, (2) 96", STD lamp	173	110	7	2490	1,098	$63	$58	$406	6.5
4406	Fluorescent, (2) 48", STD lamp	86	62	67	8760	14,086	$803	$30	$2,010	2.5
4407	Fluorescent, (2) 96", STD lamp	173	110	2	2241	282	$16	$58	$116	7.2
4675	Fluorescent, (2) 48", STD lamp	96	62	22	2988	2,235	$127	$30	$660	5.2
473	Fluorescent, (4) 48", STD lamp	192	110	2	2241	368	$21	$37	$74	3.5
4924	Fluorescent, (2) 48", STD lamp	96	62	9	2241	686	$39	$30	$270	6.9
501	Fluorescent, (2) 48", STD lamp	96	62	2	2490	169	$10	$30	$60	6.2
5104	Fluorescent, (2) 48", STD lamp	96	62	16	2490	1,355	$77	$30	$480	6.2
5105	Fluorescent, (2) 48", STD lamp	96	62	2	2988	203	$12	$30	$60	5.2
520	Fluorescent, (2) 96", STD lamp	173	110	2	8760	1,104	$63	$58	$116	1.8
5207	Fluorescent, (2) 48", STD lamp	96	62	1	2241	76	$4	$30	$30	6.9
5207	Fluorescent, (2) 96", STD lamp	173	110	2	2241	282	$16	$58	$116	7.2
5675	Fluorescent, (2) 48", STD lamp	96	62	52	2615	4,622	$263	$30	$1,560	5.9
614	Fluorescent, (2) 48", STD lamp	96	62	4	8760	1,191	$68	$30	$120	1.8
614	Incandescent, (1) 150W lamp	150	32	10	8760	10,337	$589	$15	$150	0.3
619	Fluorescent, (2) 48", STD lamp	96	62	1	2739	93	$5	$30	$30	5.7
619	Fluorescent, (2) 96", STD lamp	173	110	9	2739	1,553	$89	$58	$522	5.9
619	Incandescent, (1) 300W lamp	300	64	6	2739	3,878	$221	$15	$90	0.4
6203	Fluorescent, (2) 48", STD lamp	96	62	11	2490	931	$53	$30	$330	6.2
6203	Fluorescent, (2) 96", STD lamp	173	110	2	2490	314	$18	$58	$116	6.5
622	Fluorescent, (3) 48", STD lamp	153	89	9	2241	1,291	$74	$33	$297	4.0
624	Fluorescent, (4) 48", STD lamp	192	110	3	2241	551	$31	$37	$111	3.5
6501	Fluorescent, (4) 48", STD lamp	192	110	17	2490	3,471	$198	$37	$629	3.2
6525	Fluorescent, (4) 48", STD lamp	172	110	12	996	741	$42	$37	$444	10.5
6525	Incandescent, (1) 75W lamp	75	20	7	996	383	$22	$15	$105	4.8
6526	Fluorescent, (2) 48", STD lamp	96	62	23	2241	1,752	$100	$30	$690	6.9
6527	Fluorescent, (2) 48", STD lamp	96	62	34	2615	3,022	$172	$30	$1,020	5.9
6575	Fluorescent, (4) 48", STD lamp	192	110	25	2241	4,594	$262	$37	$925	3.5
684	Incandescent, (1) 75W lamp	75	20	6	2241	740	$42	$15	$90	2.1
6951	Fluorescent, (2) 48", STD lamp	96	62	2	2241	152	$9	$30	$60	6.9
6951	Fluorescent, (2) 96", STD lamp	173	110	12	2241	1,694	$97	$58	$696	7.2
6951	Incandescent, (1) 90W lamp	90	23	1	2241	150	$9	$15	$15	1.8
Total				972		150,544	$8,581		$30,963	3.6

Exterior Lighting Controls

Building ID	Fixture Description	Fixture Watts	Fixture Count	kWh savings	Energy cost savings	Measure cost	SPB
1277	Fluorescent, (2) 48", STD lamp	96	3	1,261	$72	$345	4.8
1888	Fluorescent, (2) 48", STD lamp	96	3	1,261	$72	$345	4.8
1492	Fluorescent, (2) 96", STD lamp	173	15	11,366	$648	$1,725	2.7
1830	High Pressure Sodium, (1) 175W lamp	195	2	1,708	$97	$230	2.4
1888	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
4378	High Pressure Sodium, (1) 175W lamp	195	2	1,708	$97	$230	2.4
5425	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
1678	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
5974	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
5983	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
2701	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
2625	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
5980	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
2728	High Pressure Sodium, (1) 175W lamp	195	2	1,708	$97	$230	2.4
2775	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
571	High Pressure Sodium, (1) 175W lamp	195	5	4,271	$243	$575	2.4
4377	High Pressure Sodium, (1) 175W lamp	195	1	854	$49	$115	2.4
2685	High Pressure Sodium, (1) 70W lamp	83	1	364	$21	$115	5.5
3649	High Pressure Sodium, (1) 70W lamp	83	1	364	$21	$115	5.5
2128	High Pressure Sodium, (1) 70W lamp	83	1	364	$21	$115	5.5
3725	High Pressure Sodium, (1) 70W lamp	83	1	364	$21	$115	5.5
3427	High Pressure Sodium, (1) 70W lamp	83	1	364	$21	$115	5.5
4128	High Pressure Sodium, (1) 70W lamp	83	1	364	$21	$115	5.5
4725	High Pressure Sodium, (1) 70W lamp	83	1	364	$21	$115	5.5
196A	High Pressure Sodium, (1) 75W lamp	88	1	385	$22	$115	5.2
5974	High Pressure Sodium, (1) 75W lamp	88	1	385	$22	$115	5.2
6928	High Pressure Sodium, (1) 75W lamp	88	1	385	$22	$115	5.2
6925	High Pressure Sodium, (1) 75W lamp	88	2	771	$44	$230	5.2
1408	High Pressure Sodium, (1) 75W lamp	88	1	385	$22	$115	5.2
2475	Incandescent, (1) 90W lamp	90	2	788	$45	$230	5.1
2787	Incandescent, (1) 90W lamp	90	1	394	$22	$115	5.1
TOTAL			58	37,865	$2,158	$6,670	3.1

Exit Signs

Building ID	Single-Sided Incandescent Exit Signs	Existing Watts/sign	LED Watts/sign	Double-Sided Incandescent Exit Signs	Existing Watts/sign	LED Watts/sign	kWh savings	Energy Cost savings	Measure Cost	SPB
3649	4	30	2	0	50	4	981	$56	$128	2.3
5125	2	30	2	1	50	4	894	$51	$96	1.9
4576	2	30	2	0	50	4	491	$28	$64	2.3
2726	1	30	2	1	50	4	648	$37	$64	1.7
3555	1	30	2	0	50	4	245	$14	$32	2.3
6127	0	30	2	1	50	4	403	$23	$32	1.4
	10			3			3,662	$209	$416	2.0

Appendix N – Watergy Analysis

Watergy Input

ENERGY UTILITY RATE WORKAREA

Using the appropriate information collected in preparation of the water conservation survey (highlighted in red in the introduction section), please complete the following questions regarding utility rates. All required information is indicated by the light blue shaded cells.

What type of energy do you use to heat your domestic hot water?

2

1=ELECTRICITY
2=NATURAL GAS

Electricity *(Data from FY 2002 billing records)*

	Total Usage (kWh)	Total Cost ($)
Month 1	124,800	$21,500
Month 2	85,440	$12,014
Month 3	45,600	$8,434
Month 4	45,600	$8,434
Month 5	50,880	$8,658
Month 6	71,040	$11,050
Month 7	89,280	$12,670
Month 8	117,120	$18,906
Month 9	136,320	$21,614
Month 10	183,360	$29,664
Month 11	154,560	$24,197
Month 12	161,280	$24,965
Total	1265280	$202,107
Avg. Month	105440	$16,842

Average Electricity Cost per kWh **$0.16**

Natural Gas

	Total Usage (cu.ft.)	Total Cost ($)
Month 1	30,944	$184
Month 2	40,409	$335
Month 3	53,292	$427
Month 4	58,632	$420
Month 5	44,729	$356
Month 6	48,113	$348
Month 7	40,109	$282
Month 8	37,768	$212
Month 9	28,219	$196
Month 10	26,101	$193
Month 11	27,642	$197
Month 12	27,583	$210
Total	463541.0128	$3,360
Avg. Month	38628.41773	$280

Average Natural Gas Cost per cu.ft. **$0.0072**

	Fuel Oil	
	Total Usage (gal)	Total Cost ($)
Month 1	**0**	**$0**
Month 2		
Month 3		
Month 4		
Month 5		
Month 6		
Month 7		
Month 8		
Month 9		
Month 10		
Month 11		
Month 12		
Total	**0**	**$0**
Avg. Month	**0**	**$0**

Average Fuel Oil Cost per gallon

$0.00

WATER UTILITY RATE WORKAREA

Using the appropriate information collected in preparation of the water conservation survey (highlighted in red in the infroduction section), please complete the following questions regarding utility rates.

0	Enter 1 here if your water and wastewater/sewage bills are combined. Then enter combined data in the ***Water*** work area.

Water *(Data from FY 2002 Billing Records)*

	Total Usage (gallons)	Total Cost ($)
Month 1	31,092,116	$71,599
Month 2	14,562,812	$33,811
Month 3	8,421,732	$19,772
Month 4	10,164,572	$23,762
Month 5	11,540,144	$26,907
Month 6	16,827,008	$38,993
Month 7	17,400,724	$40,305
Month 8	26,225,628	$60,479
Month 9	26,938,472	$62,109
Month 10	43,858,232	$100,789
Month 11	37,366,340	$85,948
Month 12	38,327,520	$95,867
Total	282725300	$660,340
Avg. Month	23560441.67	$55,028

Average Water Cost per gallon **$0.0023**

Wastewater/Sewer *(Data from last year of complete record: June 2001 through May 2002)*

	Total Usage (gallons)	Total Cost ($)
Month 1	7,481,313	$29,797
Month 2	6,862,343	$30,474
Month 3	7,412,066	$30,474
Month 4	6,746,283	$30,474
Month 5	7,552,631	$30,474
Month 6	6,978,189	$30,474
Month 7	6,201,124	$30,474
Month 8	6,645,576	$35,759
Month 9	6,925,386	$35,759
Month 10	7,296,748	$35,759
Month 11	6,418,046	$35,759
Month 12	7,844,480	$42,365
Total	84364185	$398,046
Avg. Month	7030348.75	$33,171

Average Wastewater/Sewer Cost per gallon **$0.0047**

SAVEnergy Action Plans

Attachment A - Water

Prepared By:	**Kosol Kiatreungwattana, Architectural Energy Corporation**				
Agency:	**DOE - LLNL Main Site**				
Facility:	**Sample Building 2**				
Contact Name:	**Blair Horst**	**A/E Auditor's Name**			
Address:	**LLNL MS: L-601**	**A/E Firm Address**			
City	**PO Box 808, Livermore, CA 94550**	State:	**CA**	Zip:	**94550**
Phone/Fax:	**925-422-8965 / 2-1041**				
Date of Audit:					

Buildings included in Survey:	**Sample Building 2**
Water Provider(s):	**Hetch Hetchy & Livermore Zone-7 (backup)**
Number of Water Meters:	**N/A**
Account/Meter Numbers:	**N/A**

DOMESTIC WATER USE

Toilets

	Nameplate:	Fixture Type	GPF	Count	User Count Female	User Count Male	GPX	GPD
1	**n/a**	**valve**	**3.5**	**336**	**2933**	**733**	**99.292**	**33362**
2							**0**	**0**
3							**0**	**0**
4							**0**	**0**
5							**0**	**0**
6							**0**	**0**
							Total GPD=	**33362**

Calculations:

GPF=Gallons per flush, estimated or measured
GPD=GPF x (3 x Female Count + 1 x Male Count)
= Average gallons per day for all toilets
GPX=GPD/Fixture Count
=Average gallons per day per fixture

Urinals

	Nameplate:	Fixture Type	GPF	Count	User Count Male	GPX	GPD
1	**n/a**	**valve**	**1.50**	**137**	**733**	**16.051**	**2199**
2						**0**	**0**
3						**0**	**0**
4						**0**	**0**
5						**0**	**0**
						Total GPD=	**2199**

Calculations:

GPD=GPF x (2 x Male Count)
=Average gallons per day urinals

Lavatory Sinks

	Nameplate:	Fixture Type	GPM	Count	User Count Female	User Count Male	Wash duration (min.)	GPD
1	**Aerator**		**1.5**	**410**	**2933**	**733**	***0.17***	**3552.405**
2	**No aerator**		**2**	**1**			***0.17***	**0**
3							***0.17***	**0**
4							***0.17***	**0**
5							***0.17***	**0**
							Total Hand Washing GPD=	**3552.405**

Assume 3 hand washings per 8 hour work day per male, 4 per female.
Unless otherwise indicated, assume 10 sec. of flow per hand washing.

Calculations:

GPM=Measured gallons per minute of faucet flow
GPD= 0.17 GPM x (3 x Male Count + 4 x Female Count)
=Average gallons per day for hand washing

Other Sinks (janitor's closet, laundry, kitchen, etc.)

	Nameplate:	Fixture Type	GPM	Count	Avg. time on Daily		GPD
1	**Service**		**3**	**0**	**8**	min.	**0**
2	**Service**		**3**	**0**	**10**	min.	**0**
3	**Kitchen**		**2**	**0**	**15**	min.	**0**
4						min.	**0**
					Total Non-Lavatory Washing GPD:		**0**

Calculations:

GPD=Time On x GPM x Fixture Count
=Average gallons per day for other sink use.

Showers

	Location:	GPM	Count	Avg. Use per Day		daily GPD
1	**Standard**	**3**	**45**	**30**	min.	**4050**
2	**Low Flow Sho**	**2.5**	**14**	**30**	min.	**1050**
3					min.	**0**
4					min.	**0**
					Total GPD=	**5100**

Known Leaks

	Location:	GPM	Count	Avg. Time On		daily GPD
1					min.	**0**
2					min.	**0**
3					min.	**0**
4					min.	**0**
					Total GPD=	**0**

Calculations:

GPD= Time on x GPM x Fixture Count
=Average gallons per day for leaks

PLANT COOLING AND HEATING

Cooling Towers

Number:	0			
Age:	35	years		
Size:				
% Blow down:	50%		% Make-up	30%
Water Treatment Method:	NA			

Evaporative Coolers

Number:	0	
Age:	NA	years

Air Washers

Description:	NA

Humidifiers

Description:	NA

Boilers

Number:	0					
Age:	21	years	/	1		Electricity
Fuel Source:	2	<<<<<<<<<	ENTER<	2	FOR	Nat. Gas
Size:	0		\	3		Fuel Oil
Lbs. Steam/hr.	500					
Pressure:	200	psi				
% Condensate return:	100%		% Boiler Blow-down:			2%

Pumps

Number:	2	
Age:	4	years
Size:	3	hp

ONCE-THROUGH COOLING

Air Conditioners

Number of Units:	0			
Age:	NA	years		
Size:	0	tons	0	gallons

Other Once Through	0

OTHER

	Quantity	Uses/day	Gallons/use	Total Usage per day
Dishwashers	**0**	**0.2**	**4**	**0** gal
Washing Machines	**0**			**0** gal
				0 gal

LANDSCAPE AND DECORATIVE USES

	Square Ft	Acres	Ft water/acre/	Acre-ft/yr
Turf Area (square feet)	**0**	**0**	**10**	**0**
Landscaped Area (square feet)	**0**	**0**	**10**	**0**

SUMMARY

TOTAL DAILY DOMESTIC WATER USAGE: **44213** gal/day **does not include boiler use or landscape use.*

TOTAL ANNUAL DOMESTIC WATER USAGE: **11,495,485** gal/yr **assumes 260 operational days per year (see Inputs & Assumptions sheet to change).*

Implementation Questions

Do you want to look at Waterless or Low-Flow urinals?

1	1=WATERLESS 2=LOW FLOW

Do you want to look at faucet replacement (with IR sensored faucets) or aerators only for restroom faucets?

2	1=AERATORS ONLY 2=FAUCET REPLACEMENT

Target Usage for Conserving Plumbing Fixtures

ULF Toilet	**1.6**	Gallons per flush
ULF Urinal	**1.0**	Gallons per flush
Waterless Urinal	**0.001**	Gallons per use *(uses just 2-3 gallons HOT water for cleaning, every 8500 uses)*
Faucet	**0.5**	Gallons per minute
Showerhead	**2.5**	Gallons per minute
Dishwasher	**8.5**	Gallons per load
Washing Machine	**42.0**	Gallons per load
Faucet Aerator	**2.5**	Gallons per minute

Assumptions

Hot Water Heating	**0.2**	kWh/gallon for Electrical hot water heaters
	0.5	cf gas/gallon for natural gas hot water heaters
Faucet	**50%**	of usage is hot water
Shower	**60%**	of usage is hot water
Dishwasher	**100%**	of usage is hot water
Wash Machine	**25%**	of usage is hot water
Leaks	**10%**	of usage is hot water
Water Treatment	**0.86**	kWh / 1,000 gallons treated - Indirect savings
UAF Gas	**2.1%**	of natural gas unaccounted for - Indirect savings
WW elec	**2.85**	kWh / 1,000 gallons treated - Indirect savings
Line Losses	**14%**	of Electricity lost in transmission - Indirect savings
IR Sensored Faucet	**0.17**	minutes per use
Heat in Boiler	**362**	Btu/lb - estimate
Heat of Nat gas	**1,040**	Btu/cf
Heat of Fuel oil	**145,000**	Btu/gal
Boiler Efficiency	**70%**	Default - 95% for electric, 80% for gas/oil 20 years or less, 70% for all others
Faucet Cleaning Use	**50%**	of non-restroom faucets' usage for cleaning (i.e. bucket filling) or other uses that will not be reduced by an aerator.
Landscape Savings	**50%**	of water reduced using ET watering techniques
Blowdown Reduction	**20%**	of Boiler blowdown reduced through process optimization
Heat of Electricity	**3412**	Btu=1 kWh
One Year	**260**	days (total work days assumed, not total calendar days)

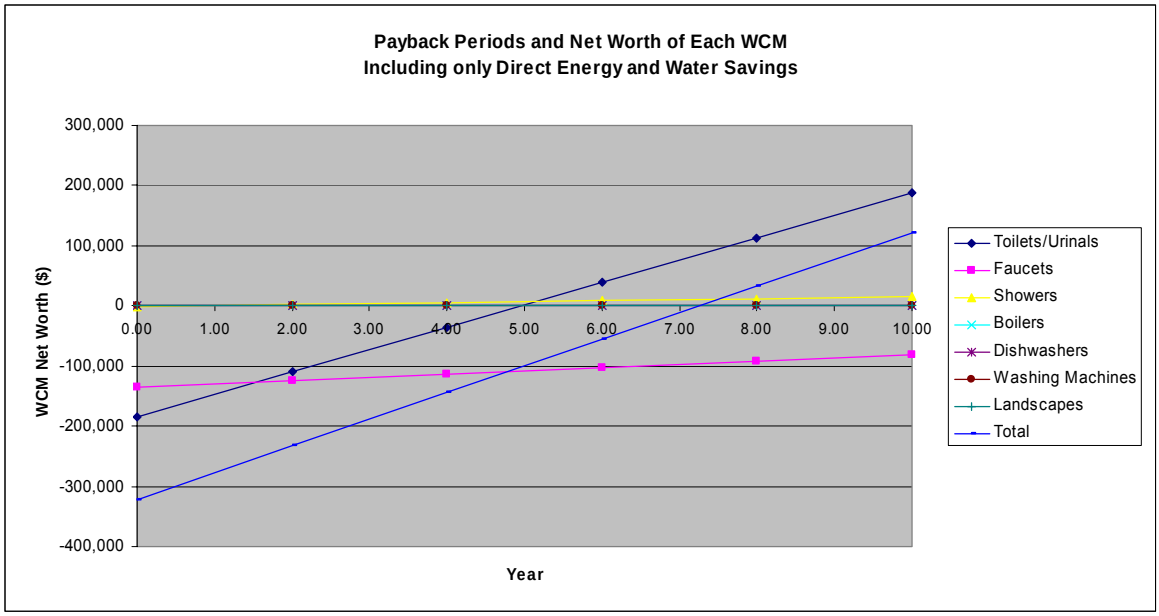
Cost Information

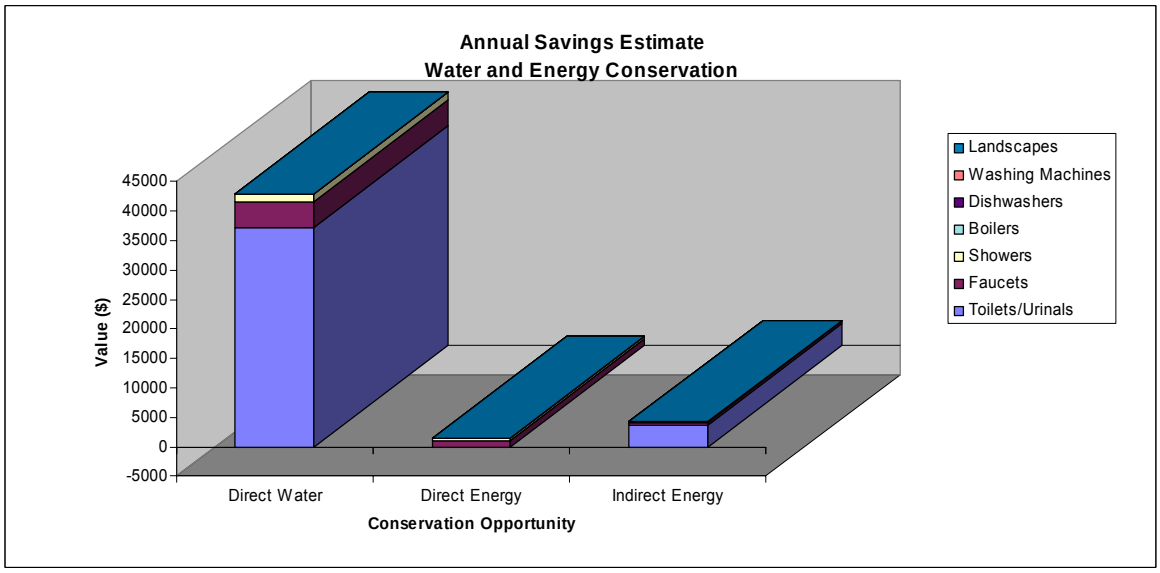
	Equipment	Labor	Total	
ULF Toilet Replacement	**$220**	**$75**	**$295**	
ULF Urinal Replacement	**$350**	**$125**	**$475**	
Waterless Urinals	**$500**	**$125**	**$625**	
Aerators	**$8**	**$5**	**$13**	
Sensored Faucets	**$280**	**$50**	**$330**	
Showerheads	**$21**	**$10**	**$31**	
Leak Detection			**$0**	
Once Thru Conversion			**$0**	
Cooling Water Reduction			**$0**	
Blowdown Reduction			**$0**	
Lawn Sprinkling reduction			**50%**	of water savings value
Washing Machine	**$400**	**$25**	**$425**	
Dishwasher	**$250**	**$75**	**$325**	

Watergy Output

Potential Conservation Opportunities

Conservation Method	Number of Installations	Total Initial Cost ($)	Annual Savings ($)			Payback Period* (yrs) *Includes Direct Energy Only
			Direct Water	Direct Energy	Indirect Energy	
Installation of ULF toilets and WATERLESS urinals	473	$184,745	$37,245	-$1	$3,639	4.96
Installation of automatic faucets	411	$135,300	$4,343	$1,116	$448	24.78
Installation of faucet aerators	0	$0	$0	$0	$0	#N/A
Low Flow showerhead	45	$1,395	$1,238	$382	$129	0.86
Boiler blowdown optimization	0	$0	$0	$0	$0	#N/A
Efficient dishwashers	0	$0	$0	$0	$0	#N/A
Efficient washing machines	0	$0	$0	$0	$0	#N/A
Landscape irrigation optimization	#N/A	$0	$0	$0	$0	Annual
Total (excluding Landscape)		**$321,440**	**$42,827**	**$1,496**	**$4,217**	**7.25**


Payback Periods and Net Worth of Each WCM
Including only Direct Energy and Water Savings
300,000
200,000
100,000
0
-100,000
-200,000
-300,000
-400,000
WCM Net Worth ($)
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
Year
Toilets/Urinals
Faucets
Showers
Boilers
Dishwashers
Washing Machines
Landscapes
Total


Annual Savings Estimate
Water and Energy Conservation
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
-5000
Value ($)
Direct Water
Direct Energy
Indirect Energy
Conservation Opportunity
Landscapes
Washing Machines
Dishwashers
Boilers
Showers
Faucets
Toilets/Urinals